foothills model *forest*

a growing understanding

MISSION

We are a ***unique community*** of partners

dedicated to providing practical solutions for ***stewardship***

and ***sustainability*** of our forest lands

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EVALUATION OF THE CANADIAN MODEL FOREST PROGRAM

PE 223/1996

MAY 1996

PREPARED FOR:

National Advisory Committee
for the
Model Forest Program Evaluation

PREPARED BY:

Gardner Pinfold Consulting Economists Limited
Halifax

UNDER THE DIRECTION OF:

Audit & Evaluation Branch
Natural Resources Canada

AUSSI DISPONIBLE EN FRANCAIS

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LIST OF ACRONYMS

BSLMF	-	Bas St.-Laurent Model Forest
CFS	-	Canadian Forestry Service
COFI	-	British Columbia Council of Forest Industries
CPPA	-	Canadian Pulp and Paper Association
CSA	-	Canadian Standards Association
DFAIT	-	Department of Foreign Affairs and International Trade
DSS	-	Decision Support System(s)
EOMF	-	Eastern Ontario Model Forest
EST	-	Enhanced Science and Technology Program
FEPA	-	Forest Economics and Policy Analysis
FHMF	-	Foothills Model Forest
FMF	-	Fundy Model Forest
FRBC	-	Forest Renewal Fund in British Columbia
FRIP	-	Forest Resource Improvement Fund in Alberta
FSC	-	Forest Stewardship Council
GDP	-	Gross Domestic Product
GIS	-	Geographic Information System
IBM	-	Information and Bio-monitoring Program
IMA	-	Interim Measures Agreement
IRM	-	Integrated Resource Management
LAMF	-	Lake Abitibi Model Forest
LBMF	-	Long Beach Model Forest
McMF	-	McGregor Model Forest
MFC	-	Model Forest (Regional) Coordinators
MFS	-	Model Forest Secretariat
MMF	-	Manitoba Model Forest
NAFTA	-	North American Free Trade Association
NFS	-	National Forest Strategy
NGO	-	Non Government Organizations
NRCan	-	Natural Resources Canada
OMNR	-	Ontario Ministry of Natural Resources
PAMF	-	Prince Albert Model Forest
WNMF	-	Western Newfoundland Model Forest

DISCLAIMER

The views, statements and conclusions expressed and the recommendations made in this report are entirely those of the author(s) and should not be construed as statements or conclusions of, or as expressing the opinions of the Canadian Forest Service, the Foothills Model Forest, or the sponsors of the Foothills Model Forest.

Foothills Model Forest is one of eleven Model Forests that make up the Canadian Model Forest Network. As such, Foothills Model Forest is a non-profit organization representing a wide array of industrial, academic, government and non-government partners, and is located in Hinton, Alberta. The three principal partners representing the agencies with vested management authority for the lands that comprise the Foothills Model Forest, include Weldwood of Canada (Hinton Division), the Alberta Department of Environmental Protection and Jasper National Park. These lands encompass a combined area of more than 2.75 million hectares under active resource management.

The Canadian Forest Service of Natural Resources Canada is also a principal partner in each of the eleven Model Forest organizations and provides the primary funding and administrative support to Canada's Model Forest Program.

The Foothills Model Forest mission: "We are a unique community of partners dedicated to providing practical solutions for stewardship and sustainability of our forest lands."

EXECUTIVE SUMMARY

The Green Plan for a Healthy Environment is the federal government's environmental action plan released in December 1990. One of the major goals of the Green Plan is to promote *the sustainable use of Canada's Renewable Natural Resources*. For forestry its goal is to *shift the management of Canada's forests from sustained yield to sustainable development.* To achieve this goal, Natural Resources Canada in February, 1991, proposed the Partners for Sustainable Development in Forestry Program (Partners Program). This program was composed of three components with an initial allocation of $100 million, over five years, as follows:

Model Forest Program – $54 million
Enhanced Science and Technology Program – $33 million
Information and Bio-Monitoring Program – $13 million

The specific objectives set for the Model Forest Program included:

- To accelerate the implementation of sustainable development in the practice of forestry, in particular the concept of integrated resource management.
- To apply new and innovative approaches, procedures, techniques and concepts in the management of forests
- To test and demonstrate best sustainable forestry practices utilizing the most advanced technology and forestry practices available.

There are ten Model Forests.

Long Beach Model Forest (LBMF)
McGregor Model Forest (McMF)
Foothills Model Forest (FHMF)
Prince Albert Model Forest (PAMF)
Manitoba Model Forest (MMF)
Lake Abitibi Model Forest (LAMF)
Eastern Ontario Model Forest (EOMF)
Bas St.-Laurent Model Forest (BSLMF)
Fundy Model Forest (FMF)
Western Newfoundland Model Forest (WNMF)

FINDINGS AND CONCLUSIONS

Partnerships

- The overwhelming impression is that creating partnerships was a major accomplishment. This was a much more difficult task than anyone expected and took much longer than the program planners and perhaps others anticipated, as much as two years or more in some cases.
- There is a widely held view across the program that Model Forests were able to "bring people to the table" more successfully than other agencies or processes. A possible reason is that they were perceived to be a neutral forum in most cases.

- Trust is the key element in the partnerships. In most cases, the Model Forests have succeeded in establishing a level of trust among the partners that was previously lacking. This has allowed them to push forward with a multi-valued approach to forest management that was simply out of the question in the past.

- The partnerships vary widely from tightly knit organizations where effective decision-making authority is concentrated in a small number of partners to relatively broad-based organizations involving many people in decision-making. Although the various mechanisms do involve multiple players, there is a perception that in the tighter organizations it is difficult for those outside the inner circle to influence decisions.

Planning

- The Model Forests started from very different points in the process. For most this meant their early planning capacity was weak and they did not really have sufficient capacity at the start to use the resources available. This led to quick spending decisions on research and other projects without a good focus. Some of this spending may have been necessary to retain partners.

- Planning capacity has clearly improved. Most Model Forests have undertaken a strategic planning process. Through this, better decision-making criteria and improved decision-making are emerging.

Achievement of Objectives

- Five years is a very short period in the life of a forest. Achievement of the objectives of the Model Forest Program must be viewed in this context.

- Many people felt that it is too early in the process to evaluate progress because they are just getting started. Although incremental technical achievements have been limited so far, the Model Forest Program is widely cited as having accelerated progress on the introduction of the sustainability approach by at least five years and maybe as much as 10 years. In effect, the Model Forest Program provided the resources and profile to do something new and different.

- There has been some movement toward sustainable forest management in the Model Forests but little has happened on the ground yet and Model Forest performance varies widely on specific issues. There is limited evidence of forest product companies transferring knowledge from the Model Forests to other parts of their operations.

- The major impact has been bringing people together (the creation of partnerships) and creating awareness of the practical issues involved in sustainable development.

- The Model Forests are not what is making sustainable development happen, but in virtually every case, they have expedited the process. That is, the Model Forests have acted as a catalyst to spur movement to sustainable development.

- There is a great diversity in the approaches followed in Model Forest development. This is healthy and certainly in line with the expectations outlined in the Guidelines for Proposals issued in 1991.

- In nine Model Forests, the current objectives are clearly stated and still capture the spirit of the original proposal; there has been some evolution of objectives as people began to understand better the nature of the multiple values in the context of their Model Forest.

- The objectives of each of the Model Forests are consistent with the Model Forest Program objectives. With varying degrees of emphasis, the Model Forests have made commitments to carry out a range of activities that cover environmental, social and economic issues pertinent to improving Canada's capabilities to conduct sustainable forest management.

- Application of Model Forest findings by the partners has been limited.

- The overall goal of the Model Forest Program, its three specific objectives and the operations of the Model Forests are consistent with the National Forest Strategy.

- The National Forest Strategy has not played a strong, overt role in either the planning or the operations of the Model Forests.

- It is too early in the Program's life to tell whether it has affected Canada's competitiveness in forest products.

- There is a strong dichotomy between industry and environmental group views on the Program's ability to make Canada less subject to protests stemming from environmental concerns. The industry thought that the Model Forest Program, in combination with other initiatives, had the potential to reduce protests from environmental concerns. The environmentalists, on the other hand, indicated that significant changes on the ground were needed to affect the risk of protests and that the Model Forest Program was unlikely to have much effect on it.

- Some improvement to the international acceptance of Canada's forests can be attributed to the Model Forest Program. However, there is broad agreement that it is probably too early to identify the specific incremental effects of the program.

Communication

- In general, the Model Forests have tended to be inward looking. That is, their focus has been more on creating a working partnership, devising strategic priorities and getting project work underway, rather than on communicating with people and groups outside the Model Forests. The inward focus is now being resolved and greater efforts are being directed at external communication. Improved communications, both externally and between Model Forests needs to be a focus of any second-generation program.

Model Forest Network

- Those who attended the Model Forest Network meetings felt they were useful and served to inform them about the other Model Forests. Still, we observed that there was little vertical penetration of knowledge about the Network activities among the participants in the Model Forests. As a result, there was little awareness of what projects were going on in other Model Forests.

- The activities of the Model Forest Secretariat were not well known outside of the General Managers.

International

- The Model Forest Program has gained a measure of international recognition through the international conference hosted by the PAMF, the steady flow of international visitors to the various model forests and the creation of the International Model Forest Program. The international elements have also enhanced international awareness by Canadians involved with the Canadian Model Forest Program.

Policy

- The Model Forests are operating in the context of a rapidly changing, dynamic policy environment. This may require great flexibility on their part to adapt to new circumstances at the same time that they are trying to influence the shift to sustainable forest management.

- So far, the Model Forests have not had a major impact on provincial forest policy. This is not surprising since they have yet to produce a large or significant body of results.

- The Model Forest Program has operated in the context of downsizing by provincial governments. The Program gave alternative approaches to the creation of new alliances at the provincial level, and to some extent served as an alternative funding source for forest-related projects no longer supported by the provinces.

- In most provinces, there has been little significant change in the way provincial policies have affected the activities of the Model Forests since inception of the program. British Columbia and Ontario are exceptions where recent legislation and policy changes have been so sweeping as to overtake and significantly affect the activities of the Model Forests.

Decision-making

- Consensus methods were widely used in the Model Forests. Where used, they were generally regarded as essential but they did not always deal with real conflicts. Instead, conflicts were avoided or simply not discussed.

- The use of consensus decision-making may lead to perception of conflicts of interest in considering projects for funding by a Model Forest. In some Model Forests, there were situations where individuals submitting projects for funding assistance actually sat on committees that reviewed and recommended projects for funding.

First Nations

- There has been First Nations involvement in the six Model Forests where there is a local First Nations presence - Long Beach, McGregor, Prince Albert, Manitoba, Lake Abitibi and Eastern Ontario. In Eastern Ontario, Prince Albert and Long Beach, the First Nations contribution has been highly visible and positive, including such items as large employment gains in forest-related employment at

PAMF, GIS training at PAMF and LBMF (which led to GIS-related employment) and at EOMF, the Mohawk community at Akwesasne has introduced a consensus-based decision-making model based on Aboriginal values. At McGregor, First Nations involvement is in the early stages and the proposed approach appears to be very promising. So far, at Manitoba there has been no formal First Nations participation, although some projects have been directed at Aboriginal concerns and discussions continue on ways to bring in the First Nations as partners. At Lake Abitibi, there has not been major involvement but an important First Nations cultural atlas has been completed.

Provincial Involvement

- We found a variable level of commitment to the Model Forest Program by the provinces. The Model Forests must seek ways to persuade the provincial governments to buy into the program of activities and outputs of the Model Forests for the Program to achieve maximum impact on forest management decision-making.

Research

- Research has been a major focus of the early years of the Model Forests. We estimate that almost 60% of Model Forest project activity can be classified as research, broadly defined. This is the result of recognizing information gaps that needed to be filled to move along the sustainable development path. It may also be related to the tendency already noted to fund projects promoted by partners to retain their interest.

- In spite of the research focus, the Partners in Sustainable Development programs, aimed at an accelerated and enhanced forestry research program and enhanced information gathering and bio-monitoring, played only a minor role in the Model Forests. Most Model Forest participants were unaware of these programs and their intended links with the Model Forest Program.

- Initially, research programs tended to be unfocussed, reflecting the interests of researchers and not necessarily the needs of resource managers.

- All partnerships have since recognized the need for a more structured process to identify priorities and evaluate proposals. As a result, research focus is steadily improving.

- There is a realization of the value of relationships with various research laboratories. In particular, universities within reach of the Model Forest sites are being used for this purpose.

- Where early involvement of research agencies has occurred, initial research efforts appear to have been more focussed, as the interaction between researchers and forest practitioners has fostered a better understanding of the linkages between research and practice.

Sustainable Development

- All ten Model Forests have acquired a broad understanding of sustainable forest management, and have written it down in the form of a vision statement or broad objectives. All statements contained elements which incorporated multiple

social, economic and environmental values into a framework which projected into future generations. We found no evidence that the Model Forests have reached general agreement on what constitutes sustainable development.

- Model Forests have made progress in recognizing which sustainable development values need to be measured, and each Model Forest is evolving in its own direction, developing its own measures and indicators to reflect the local situation. There are no commonly accepted measures of sustainable development across the Model Forests.

- Currently the activities and outputs from the Network of Model Forests have had little impact on the achievement of Model Forest Program objectives.

- Very little awareness of Network activities was evident beyond the General Manager level.

- The role of the Network in information exchange will grow in the future as the focus of attention extends beyond the borders of each Model Forest.

Management

- A persuasive rather than an autocratic approach was used to influence the management and administration of Model Forests by the Canadian Forest Service (CFS). This was effective as it allowed each Model Forest the flexibility to develop its own unique character and approach toward implementing sustainable forestry, and yet gave the staff and partners a valuable communication link to other agencies and CFS researchers.

- The role of the Secretariat in facilitating the networking process between the Model Forests at the General Manager level was seen as valuable and responsive, but not broadly based.

- Relationships between the individual Model Forests and the Model Forest Coordinators (MFCs) varied considerably across the Network. On the positive side, this allowed the MFCs to be responsive to the needs of the individual Model Forests. However, in some cases, it created unevenness in the level of support provided to individual Model Forests.

Model Forest Resources

- Direct federal contributions are the major cash funding source.

- Most non-CFS contributions to the Model Forests came in the form of in-kind contributions or via joint funding of specific projects.

- Had the same level of federal resources not been available a reduced level of program activity would have resulted.

- Most partners showed reluctance to add additional resources based on the accomplishments to date. Thus, the potential for non-CFS financial resources for the program is uncertain.

Networking

- Generally, the partnerships were in most places broad enough to ensure a positive impact on the pursuit of sustainable management at the local level.
- The Model Forests have tended to remain isolated from the broader Canadian forestry community in Canada in terms of collaborating on activities designed to achieve sustainable forestry management.
- Networking at the international level has resulted mainly from the twinning activities with other International Model Forests.

The Future

- Among the interviewees associated with Model Forests, it was virtually unanimous that there should be second generation program.
- There was generally great concern that if the Model Forest Program does not continue, much of its potential accomplishments will be lost.
- The second-generation Model Forest Program should focus less on research and much more on applied work and technology transfer.
- CFS should not expand its role in a second-generation program (except at the Network level), but there was recognition that its continued involvement is important to maintain accountability and international credibility.
- The CFS should continue to provide core funding but other partners should be willing to put up more funds in recognition of the value they are getting from the Model Forests.
- Provinces should be important players in a second-generation program.

RECOMMENDATIONS

1. We recommend that a Model Forest Program be extended for an additional five year period.
2. We recommend that as part of the next Model Forest Program all proponent sites be required to prepare a detailed proposal of how they will capitalize on their achievements to date and effect changes in forest management decision-making and implementation.

The following recommendations include some of the criteria for the renewal of contribution agreements with the existing Model Forests:

3. We recommend each Model Forest review its partnership to ensure that the views of all interested stakeholders in their area, including Aboriginal people, are adequately represented in the submission for inclusion of the site in the second phase of the Model Forest Program.

4. We recommend each Model Forest demonstrate consensus among its current partners on the goals and objectives of the proposed activities of the second phase of the program.

5. We recommend each Model Forest have as a clear goal the design, development and implementation of a plan that addresses sustainable development in forestry on the ground through a range of resource values appropriate to that area.

6. We recommend each Model Forest show where management control for the land base resides among the partners, and how those with management authority will act to implement the devised strategy.

7. We recommend each Model Forest present a plan which includes clear targets and actions, performance measures, accountability mechanisms, partners' financial contributions, and other funding sources available for the second phase of the program.

8. We recommend that in phase two of the Model Forest Program, consideration be given to expanding the Model Forest concept in other areas.

9. We recommend steps be initiated to improve networking among all Model Forest staff and partners and between all Model Forest sites.

10. We recommend that one Model Forest Network meeting per year should be totally dedicated to reporting accomplishments over the previous year and outlining plans for the next year.

11. We recommend that the Model Forest Network design and adopt a set of guidelines for recording non-CFS resources used by the Model Forests.

12. We recommend that an accessible e-mail users group be set up to facilitate communication at all levels within the Model Forest Network and with others who have an interest in sustainable forest management.

13. We recommend that CFS take on a greater liaison and coordinating role within the network.

14. We recommend that CFS should state what its expectations are for international involvement by the Canadian Model Forest Program.

15. We recommend that in any second-generation program, links to connect CFS programs be built in from the beginning.

16. We recommend that there be a rigorous, open and fully accountable process for soliciting and reviewing proposals, allocating funds and evaluating progress at each Model Forest.

1.0 INTRODUCTION

The Green Plan for a Healthy Environment is the federal government's environmental action plan released in December 1990. One of the major goals of the Green Plan is to promote *the sustainable use of Canada's Renewable Natural Resources*. More specifically, for forestry its goal is to *shift the management of Canada's forests from sustained yield to sustainable development*. To achieve this goal, Natural Resources Canada in February, 1991, proposed the Partners for Sustainable Development in Forestry Program (Partners Program). This program was designed to accelerate the implementation of sustainable development in forestry. It was composed of three components: a network of model forests, complemented by an enhanced research program and an information program. The initiatives had an initial allocation of $100 million, over five years, as follows:

Model Forest Program – $54 million
Enhanced Science and Technology Program – $33 million
Information and Bio-Monitoring Program – $13 million

The purpose of the Partners Program was to demonstrate leadership in the forest sector and to indicate a shift in Canada's forest management from one based on sustained timber yield to one focusing on forest ecosystem management (sustainable development). This would ensure continued economic development while sustaining the environmental integrity of forest ecosystems.

At the time of introduction of the Partners Program, the forestry community faced unprecedented challenges with public demands for implementation of ecological principles in forest management and for higher value to be placed on non-timber components of the ecosystem. To address these challenges effectively, more understanding was required about the life-support systems that sustain forest productivity and biodiversity and about the impacts of human interventions upon these ecosystems. Regardless of the knowledge base, a change in approach and attitude from managing trees to managing forest ecosystems for multiple values was required.

Under the Model Forest Program, a network of large scale working models of sustainable forestry was to be established in each of the major forest regions of Canada.

The specific objectives set for the Model Forest Program included:

- To accelerate the implementation of sustainable development in the practice of forestry, in particular the concept of integrated resource management.
- To apply new and innovative approaches, procedures, techniques and concepts in the management of forests
- To test and demonstrate best sustainable forestry practices utilizing the most advanced technology and forestry practices available.

The program was announced in September of 1991. Criteria were established and a public request for proposals from parties interested in establishing Model Forests was issued. Fifty proposals were received in early 1992. The competition was administered

by a National Advisory Committee on Model Forests who made recommendations for Model Forests. In June 1992, ten Model Forests were announced. These included:

Long Beach Model Forest (LBMF)
McGregor Model Forest (McMF)
Foothills Model Forest (FHMF)
Prince Albert Model Forest (PAMF)
Manitoba Model Forest (MMF)
Lake Abitibi Model Forest (LAMF)
Eastern Ontario Model Forest (EOMF)
Bas St.-Laurent Model Forest (BSLMF)
Fundy Model Forest (FMF)
Western Newfoundland Model Forest (WNMF)

The following map shows the location of each Model Forest.

Each proposal was required to identify a broad range of partners and outline a management structure. In addition, they had to set out visions and specific goals and objectives. They also had to demonstrate how they would communicate principles and procedures for sustainable development of the forest resource and serve as technology transfer agents.

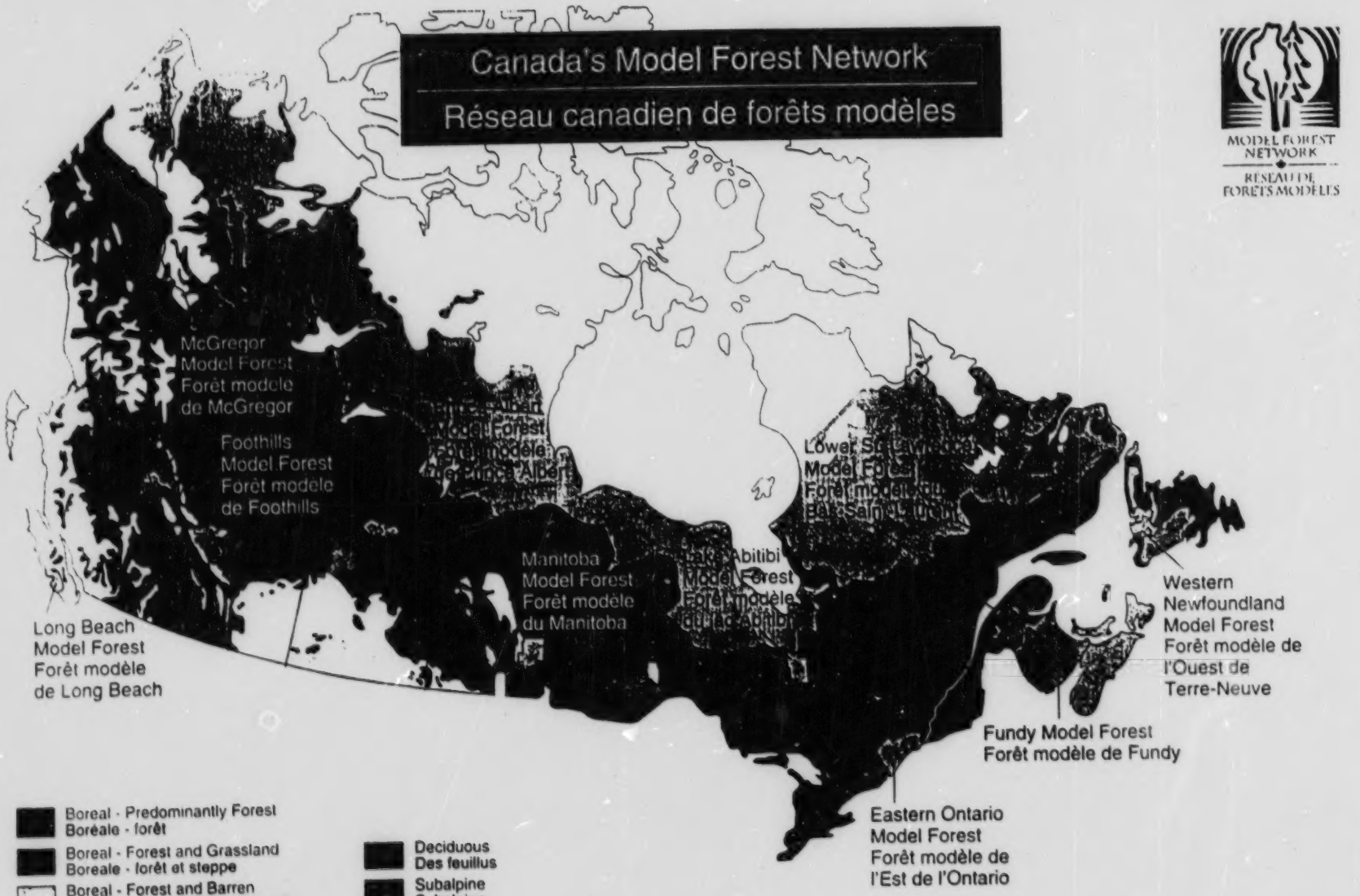
Each of the ten model forest sites have negotiated a contribution agreement with Natural Resources Canada. The various Model Forest organizations are incorporated as non-profit organizations made up of various stakeholders. All are managed by a Board of Directors consisting of active stakeholders. These Boards are supported by employed staff.

Evaluation Objective

The Audit and Evaluation Branch of Natural Resources Canada have commissioned an Evaluation of the Model Forest Program. The working objective for the Evaluation is to:

- Permit a program-wide assessment and analysis that will support decision-makers in determining its future. Several aspects of the program will be examined and the following determined: the progress that has been made towards the achievement of objectives, the impacts of the program, the effectiveness of program management, and the potential for long-term viability independent of current federal financial contribution levels.

More specifically the evaluation is required to address 18 Evaluation Issues. These issues were identified by the Audit and Evaluation Branch as providing the framework for determining what has happened as a result of the program.


Canada's Model Forest Network
Réseau canadien de forêts modèles
MODEL FOREST NETWORK
RÉSEAU DE FORÊTS MODÈLES
McGregor Model Forest Forêt modèle de McGregor
Foothills Model Forest Forêt modèle de Foothills
Manitoba Model Forest Forêt modèle du Manitoba
Western Newfoundland Model Forest Forêt modèle de l'Ouest de Terre-Neuve
Long Beach Model Forest Forêt modèle de Long Beach
Fundy Model Forest Forêt modèle de Fundy
Eastern Ontario Model Forest Forêt modèle de l'Est de l'Ontario
Boreal - Predominantly Forest
Boréale - forêt
Boreal - Forest and Grassland
Boréale - forêt et steppe
Boreal - Forest and Barren
Boréale - forêt et terrain dénudé
Great Lakes - St. Lawrence
Des Grands Lacs et du Saint-Laurent
Montane
Montagnarde
Coast
Côtière
Columbia
Du Columbia
Deciduous
Des feuillus
Subalpine
Subalpine
Acadian
Acadienne
Grassland
Steppe
Tundra
Toundra
Model Forest
Forêt modèle
Natural Resources Canada
Canadian Forest Service
Ressources naturelles Canada
Service canadien des forêts

Methodology

The detailed methodology for preparing this evaluation is set out in a separate volume entitled *Model Forest Evaluation Methodology Report*, December 1995. This report was reviewed and accepted by the National Advisory Committee for the Model Forest Evaluation. The challenge for conducting this evaluation was to design methods of data collection and analysis that allow the evaluation to reach credible, defensible conclusions about the Model Forest Program's contribution to achieving its overall objectives.

Our approach was to collect and analyze multiple lines of evidence. By this we mean that we used alternative sources of information (primarily, printed material including reports, proposals, minutes, etc., interview data, and survey data) collected by a variety of methods such as a literature review, site visits, personal interviews, telephone interviews and stakeholder consultation. The multiple lines of evidence have provided a means of corroborating information obtained from one line by comparing it with the information coming from the other lines. Overall, analysis of all the data collected provides a clear view on the status of the of the Model Forest Program in achieving its objectives. It also generated information to support the Evaluation Issue findings and conclusions. The multiple lines of evidence used are as follows:

Literature Review

This includes reading and reviewing any written material relevant to the Model Forest evaluation.

Site Visits

We visited all ten model forests. Each visit consisted of a two to three person evaluation team visiting a site for two to three days. The content of the site visits varied from Model Forest to Model Forest. The site visit interviews were conducted using an Interview Guide. Through these site visits we conducted almost 250 personal formal interviews. In addition we came in contact with numerous others whose perceptions of the program were captured.

A breakdown is presented below of the site visit interviews by type of interviewee. This clearly demonstrates that a broad perspective was captured as input to the evaluation. We should note that although most of these interviews were conducted with people directly affiliated with individual Model Forests, we endeavoured, where ever possible, to collect more broadly based viewpoints. For instance, both industry and government officials did provide what we regarded as frank opinions on what influence the program's activities were having on their forest management jurisdictions outside the Model Forest. We are confident that the completed interviews ensure the reliability and validity of the evaluation findings.

	# of Interviews	%
Model Forest staff	43	17.4
Government officials (federal, provincial and municipal)	67	27.1
Industry	49	19.8
Non-governmental organizations	41	16.6
Universities	33	13.4
First Nations	14	5.7

In addition to the site visit interviews, our evaluation team also participated in other activities[1] that have contributed to the evaluation findings. These included:

- Convening round table discussions (3);
- Tours of the Model Forests (3);
- Dinner meetings with Board of Directors (3);
- Attendance at Project Presentation Events (3).

Other Interviews

Aside from the site visits, we also conducted other interviews, both in-person and by telephone, of other knowledgeable people of the program and also peers of the program. In total, about 50 of these kind of interviews were completed.

Stakeholder Consultation

This was carried out by means of a mail out questionnaire. The purpose of the stakeholder consultation was to give a very broad cross-section of the Model Forest stakeholders an opportunity to share their views on the operations and accomplishments of the Model Forest Program. The evaluation mailed out 947 questionnaires to contact names supplied by the Model Forests: 460 were returned for an overall response rate of 48.6 percent.

The Evaluation Team

This evaluation was conducted jointly by the following consultants:

Dr. Tom Pinfold, Gardner Pinfold Consulting Economists Limited
Mr. Robert Fraser, Gardner Pinfold Consulting Economists Limited
Dr. Rod Carrow, Forestry Consultant
Dr. Steve Thompson, Chair in Sustainable Development, University of New Brunswick
Mr. Erik Wang, Timberline Forest Inventory Consultants
Mr. Doug Walker, Timberline Forest Inventory Consultants
Dr. Thom Erdle, Vanguard Forest Management
Dr. Pierre Zundel, Faculty of Forestry and Environmental Management, University of New Brunswick

[1] Discussions with individuals at these activities are not included in the interview numbers above.

2.0 CONCEPTUAL FRAMEWORK

The Model Forest Program is really an experiment in the application of sustainable development concepts within the broader, dynamic process of forest management. Things are changing both inside and outside the Model Forests. Non-Model Forest managers are pursuing and reacting to the sustainable development concept in their own way and on paths that may be parallel to or may cross the Model Forest path. What we want to know is: What has happened inside the Model Forests? What has been the impact and influence of Model Forest Program activities on the forest management policies, practices and decisions of forest managers outside the Model Forests? And how, and in what way, is there any difference between what takes places on lands within Model Forest boundaries and what takes place on other forest lands?

To begin answering these questions, we found it useful to view the Model Forest Program within two conceptual frameworks. First, it is helpful to consider the Program and its activities in terms of the forest management process. To do this, we set out below a simplified version of this process and suggest generally how to use it to examine the Model Forest Program. We use a slightly modified version of this framework to examine objectives' achievement and the future of the Model Forest Program in Chapters 4 and 5. Second, we have found it enlightening to consider the Model Forests as self-directed teams. We present a simple model of self-directed teams below as an aid to understanding the process Model Forests needed to engage in to create and build their partnerships.

The Forest Management Process

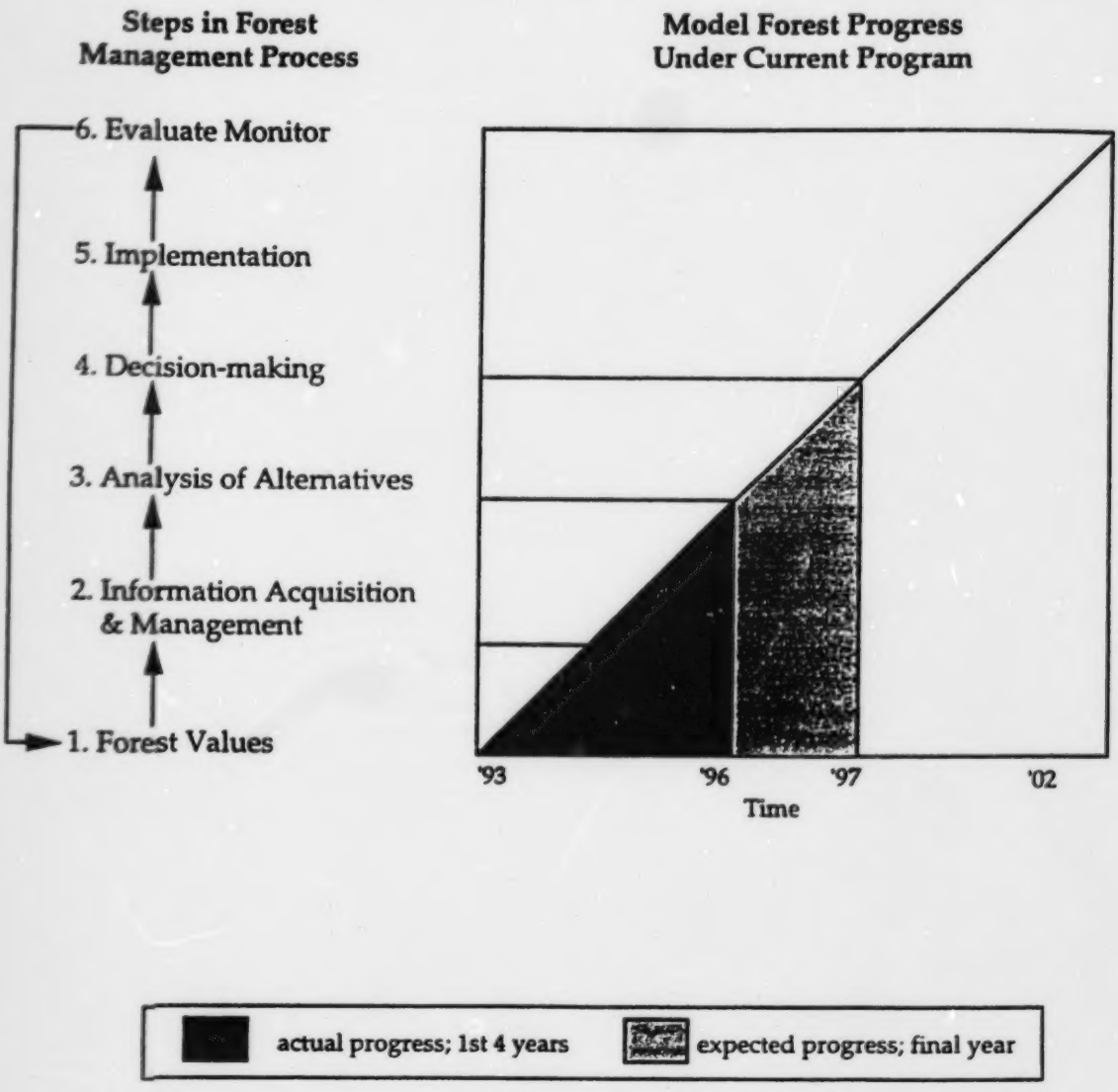
In simple terms, the forest management process can be viewed as a sequence of six steps which begins with the identification of forest values of concern and ends with evaluation of the forest response to implemented activities aimed at achieving specific objectives set for those values (Figure 1). Ideally, this process forms a closed loop and operates iteratively so that new values, better information, and improved understanding can be systematically incorporated to improve forest management over time.[2] We briefly define this process here to provide a context for our findings, commentary, and recommendations which follow. Two points are worth noting. First, the Forest Values stage really captures what is a profound shift from managing forests for timber only to managing forests for a multiplicity of values. Second, we must stress that in reading Figure 1, it is important to distinguish the forest management process (on the left side) from the Model Forests and the Model Forest Program (on the right side). The Model Forests do not make management decisions. They do however improve the ability of managers to manage the forest by creating new and better information.

1. *Identification of Values*

This involves identification of the forest values for which forest management objectives will be defined. To ensure this set is comprehensive and consistent with the environmental, economic, and social elements of sustainable forest management, it is important that a broad range of forest values be considered. It is important that a broad range of interests and perspectives be represented to ensure a broad range of values gets

2 The process depicted in Figure 1 will of course be more chaotic than the linear nature of the diagram makes it appear. Changing values and the introduction of new values will introduce breaks and loopbacks into the system. Values will not be uniform in the period over which they can be implemented and monitored.

Figure 1
Schematic of Forest Management Process and Model Forest Progress Under Current Program



meaningful consideration. In order to achieve a fair hearing and full consideration of those interests and perspectives, it is important that constructive communication and a level of trust be established among parties representing those perspectives.

Much of the Model Forest effort and progress to date has been in organizing partnerships and stakeholder groups which represent these interests, incorporating the members' views on forest values into the objectives of the Model Forests, and establishing positive communication links between the parties involved.

2. *Assembly of Information and Information Management Tools*

With the key forest values identified, the necessary information, databases, forecasting models, and analytical tools must be assembled, built, or acquired so that a systematic exploration and evaluation of means by which to achieve the forest value objectives can be conducted.

Although there is lots of variation among Model Forests, many of them have made significant advances in this area including:

- inventory data acquisition and enhancement;
- loading data into geographic information systems;
- research studies covering a variety of topics including forest data, wildlife habitat, social (including Aboriginal issues) and economic data, watershed data; and,
- model construction.

While advances have been made, we are concerned that information gathering has, in some cases, been ad hoc and not necessarily linked to the forest management process.

3. *Analysis of Alternatives*

With the required data and tools assembled, various alternative strategies must be defined and evaluated with respect to their anticipated impact on all forest values identified by the stakeholders. Good communication within the stakeholder group is essential to ensure that this exploration is wide ranging and covers the whole spectrum of alternatives, including those unlikely to be considered under conventional approaches to forest management.

We found some evidence of Model Forest progress in this stage of the management process. However, given their progress in the previous two steps, some Model Forests are likely to move to this stage in the final year of the program.

4. *Decision-making and Trade-offs*

In simple terms, this is where a selected strategy, or course of action, is chosen from the alternatives examined. In practical terms, next to implementation, it is probably the most challenging and important because it defines what actually will or will not get done in the forest and where. Further, it forces an explicit weighting and trade-off between conflicting or incompatible forest values. The outcome of this process is an explicit management plan which provides the blueprint for implementation of the chosen strategy.

Only one of the Model Forests could be said to have advanced to this stage of the management process.

5. Implementation

Implementation converts the strategy into reality by on-the-ground execution of the activities which are prescribed in the management plan. This is the most tangible outcome of the management process and it is the only one which directly affects the status of the forest itself.

Except in a few instances, such as site-specific recreational activities (e.g., trail construction), design of cut blocks sensitive to Caribou migration patterns, the adoption of a new logging technique (called Corridor Selection Harvesting), implementation of the métayage (Tenant forest farming) project,[3] we found no widespread evidence of changes to management implementation practices brought about by the Model Forest Program. This cannot happen until the prerequisite steps of analysis and decision-making are complete.

6. Evaluation and Monitoring

The management strategy is implemented based on expectations that it will result in forest conditions which are consistent with the forest value objectives. Whether the forest actually develops as expected will depend upon many factors including the accuracy of forecasts of change, understanding of the dynamics and biology of the forest, and implementation of activities. Because so many sources of uncertainty exist, it is likely that expected and actual outcomes of management will diverge. The questions are "by how much?" and "why?". Evaluation and monitoring measures should be in place to detect that divergence and to isolate the likely causes so that the appropriate responses can be incorporated in the next cycle of the management process.

No Model Forests have moved to the stage where evaluation and monitoring of forest management can be undertaken.

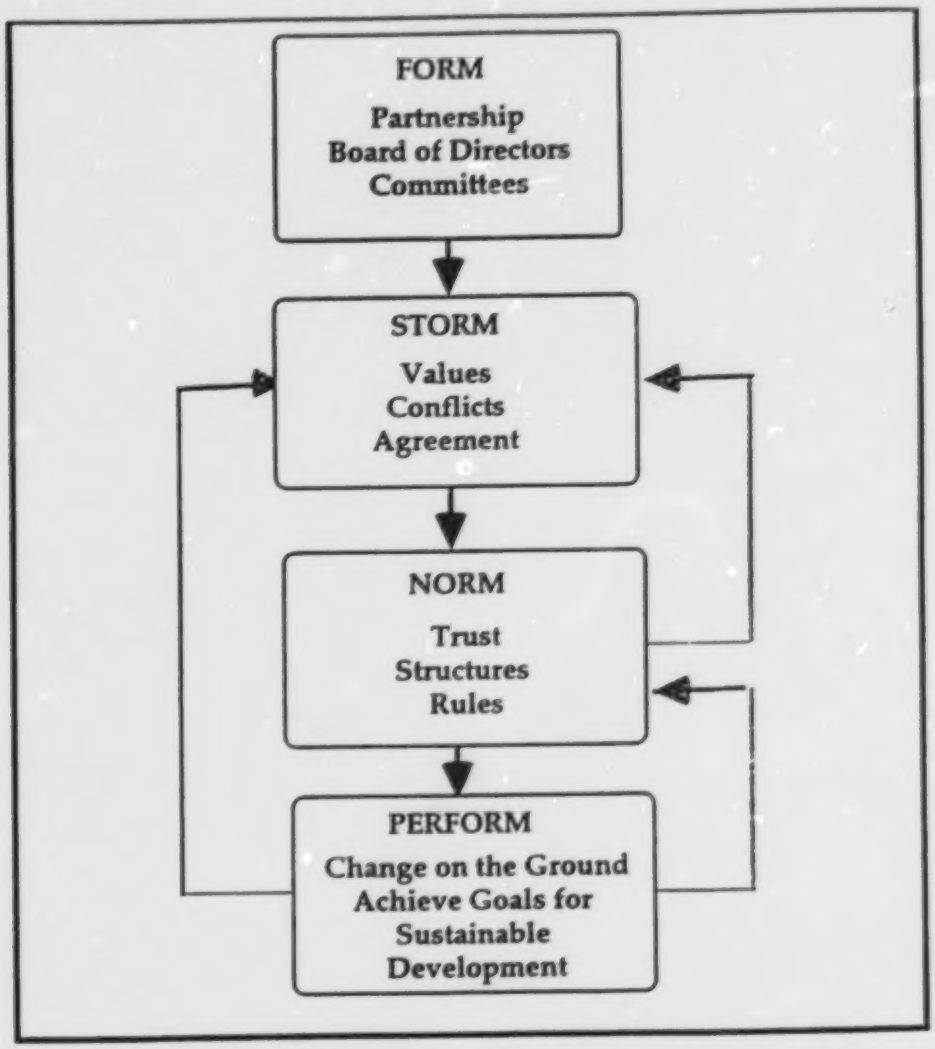
The Model Forest as a Self-Directed Team

In cases where the people involved in managing the activities of a Model Forest did not work together previously, the first years of the Model Forest followed the sequence of developmental phases typical of self-directed teams: **form, storm, norm, perform**. (See the figure below.)

The forming component involves putting together the team and initial structures associated with it. As the team attempts to get to work, implicit assumptions about team goals, flaws in the initial structures and hidden value conflicts come to the surface and cause strong disagreement (the "storm" component). As the team works through these difficulties, its members develop trust, structures and team "rules" that reflect its growing understanding of each other and of the task at hand (the "norm" phase). Once the three initial phases are complete, the team settles down to work on the concrete achievement of its goals (the "performing" component). The process is not entirely linear however and the team may need to periodically revisit the "norm" stage as its activities

3 This list is not meant to be exhaustive. We simply mean that examples can be cited but widespread implementation has yet to be achieved.

expose more of the underlying beliefs and values of its members or as new situations develop, leading to "storms". Most Model Forests are now coming out of the "norm" and into the "perform" phase. It can, however, be expected that more storms are yet to come as most Model Forests have not yet reached the stage at which their activities will result in tangible trade-offs in values on the ground. Also, the addition of new partners may cause some re-visiting of the storm and norm phases.



As noted, most of the Model Forests have reached the perform stage. In the case of Bas St.-Laurent, this seems to be due to a long-standing working relationship between the decision-makers in the forest and the relatively narrow range of values among main decision-makers. In this particular case all the decision-makers are professional foresters representing organizations with few grounds for disagreement. In the case of McGregor, the Model Forest systematically worked through its norming activities, thus shortening the time required for this phase and resulting in clearer goals and functional procedures.

Long Beach Model Forest stands out as an exception. Although it has initiated and completed some project work, LBMF is just now reaching the point of moving strongly into the perform phase, having spent most of its time attempting to work through the first three phases. Given the depth of feeling among people in the area, further storming and norming for this Model Forest are certainly possible.

3.0 OVERVIEW OF FINDINGS AND CONCLUSIONS

The following points summarize the major findings of the evaluation. These findings do not necessarily correspond directly to the evaluation questions discussed in the next section, although most are discussed in greater detail within the context of at least one of them. These findings are based on the collective view of the evaluation team drawing on all aspects of the multiple lines of evidence used to conduct this evaluation.

Partnerships

- The overwhelming impression among Model Forest participants, and the evaluation team, is that creating partnerships was a major accomplishment. This was a much more difficult task than anyone expected and took much longer than the program planners and perhaps others anticipated, as much as two years or more in some cases. In other words, the building of personal relationships between former antagonists is a slow process but nevertheless a key result. This is partly due to the fact that the proposals were mostly written by one or two people. The wider (prospective) partnership people did not understand deeply what they were buying into. The winning Model Forests had to assemble their partners and pass through the form-storm-norm-perform stages mentioned previously.

- There is a widely held view across the program that Model Forests were able to "bring people to the table" more successfully than other agencies or processes. A possible reason is that they were perceived to be a neutral forum in most cases.

- Trust is the key element in the partnerships. In most cases, the Model Forests have succeeded in establishing a level of trust among the partners that was previously lacking. This has allowed them to push forward with a multi-valued approach to forest management that was simply out of the question in the past.

- For most of them, there is now excellent partner cooperation inside the Model Forests. Pre-existing power relationships were important in shaping the ability of Model Forests to get the consensus partnership working; where there was a history of such relationships the Model Forests were quick to start implementing their proposal in a strategic way.

- Where the partnership structure is simple, objectives are clear and there are relatively few resource conflicts, progress was made in achieving objectives.

- As they have evolved, the partnerships vary widely from tightly knit organizations where effective decision-making authority is concentrated in a small number of partners, to relatively broad-based organizations involving many people in decision-making. Although the various mechanisms do involve multiple players, there is a perception that in the tighter organizations it is difficult for those outside the inner circle to influence decisions.

Planning

- As noted in the partnership discussion, the Model Forests started from very different points in the process. For most this meant their early planning capacity was weak and they did not really have sufficient capacity at the start to use the resources available. This led to quick spending decisions on research and other projects without a good focus. Some of this spending may have been necessary to retain partners.

- Planning capacity has clearly improved. Most Model Forests have undertaken a strategic planning process. Through this, better decision-making criteria and improved decision-making are emerging.

Objectives Achievement

- Five years is a very short period in the life of a forest. Achievement of the objectives of the Model Forest Program must be viewed in this context.

- In this vein, many people felt that it is too early in the process to evaluate progress because they are just getting started. (The evaluation team does not share this view, as the findings discussed later clearly show.)

- *Has the program accelerated the implementation of sustainable development?*

- There has been some movement toward sustainable forest management in the Model Forests but little has happened on the ground yet and Model Forest performance varies widely on specific issues. There is limited evidence of forest product companies transferring knowledge from the Model Forests to other parts of their operations.

- The major impact has been bringing people together (the creation of partnerships as discussed above) and creating awareness of the practical issues involved in sustainable development.

- The Model Forests are not what is making sustainable development happen, but in virtually every case, they have expedited the process. That is, the Model Forests have acted as a catalyst to spur movement to sustainable development. Estimates vary but the general view among partners is that the Model Forests have accelerated the process by five to ten years in their locality.

- *Has the program applied innovative approaches to the management of forests?*

- Although there is little evidence of changes in forest management on the ground, the Model Forest Program has a chance to bring change towards sustainable development with much better understanding.

- Overall, the program is seen as a positive experience and is described in terms such as expediter, vehicle, catalyst, and accelerator. (Some exceptions to this view are noted in the next section.)

- *Have the best sustainable forestry practices been tested and demonstrated?*

- There is a great diversity in the approaches followed in Model Forest development. This is healthy and certainly in line with the expectations outlined in the Guidelines for Proposals issued in 1991.

- There has been some demonstration of best sustainable forestry practices but the focus of the Model Forests, as evidenced elsewhere in the report, has been on partnership building, data collection and research.

Incrementality

- As already noted, the Model Forests created partnerships that did not exist and probably would not have existed in the absence of the Program. This is regarded by many as an exceedingly important accomplishment, one that is absolutely necessary to achieve results on the ground and get the forest product companies to adopt new ways of behaving. Although incremental technical achievements have been limited so far, the Model Forest Program is widely cited as having accelerated progress on the introduction of sustainability approach by at least five years and maybe as much as 10 years. In effect, the Model Forest Program provided the resources and profile to do something new and different.

Communication

- In general, the Model Forests have tended to be inward looking. That is, their focus has been more on creating a working partnership, devising strategic priorities and getting project work underway, rather than on communicating with people and groups outside the Model Forests. Based on our site visits, we would say that the inward focus is now being resolved and greater efforts are being directed at external communication. Improved communications, both externally and between Model Forests needs to be a focus of any second-generation program.

Model Forest Network

- Those who attended the Model Forest Network meetings felt they were useful and served to inform them about the other Model Forests. Still, we observed that there was little vertical penetration of knowledge about the Network activities among the participants in the Model Forests. As a result, there was little awareness of what projects were going on in other Model Forests.

- The activities of the Model Forest Secretariat were not well known outside of the General Managers.

International

- The Model Forest Program has gained a measure of international recognition through the international conference hosted by the PAMF, the steady flow of international visitors to the various model forests and the creation of the International Model Forest Program.

- The international elements have also enhanced international awareness by Canadians involved with the Canadian Model Forest Program.

Policy

- The Model Forests are operating in the context of a rapidly changing, dynamic policy environment. This may require great flexibility on their part to adapt to new circumstances at the same time that they are trying to influence the shift to sustainable forest management.

- So far, the Model Forests have not had a major impact on provincial forest policy. This is not surprising since they have yet to produce a large or significant body of results.

- The Model Forest Program has operated in the context of downsizing by provincial governments. The Program gave alternative approaches to the creation of new alliances at the provincial level, and to some extent served as an alternative funding source for forest-related projects no longer supported by the provinces.

Decision-making

- Consensus methods were widely used in the Model Forests. Where used, they were generally regarded as essential but did not always deal with real conflicts. That is, conflicts were avoided or simply not discussed.

- The use of consensus decision-making may lead to perception of conflicts of interest in considering projects for funding by a Model Forest. In some Model Forests, there were situations where individuals submitting projects for funding assistance actually sat on committees that reviewed and recommended projects for funding.

First Nations

- There has been First Nations involvement in the six Model Forests where there is a local First Nations presence - Long Beach, McGregor, Prince Albert, Manitoba, Lake Abitibi and Eastern Ontario. In Eastern Ontario, Prince Albert and Long Beach, the First Nations contribution has been highly visible and positive, including such items as large employment gains in forest-related employment at PAMF, GIS training at PAMF and LBMF (which led to GIS-related employment for some people) and at EOMF, the Mohawk community at Akwesasne has introduced a consensus-based decision-making model based on Aboriginal values. At McGregor, First Nations involvement is in the early stages and the proposed approach appears to be very promising. So far, at Manitoba there has been no formal First Nations participation, although some projects have been directed at Aboriginal concerns and discussions continue on ways to bring in the First Nations as partners. At Lake Abitibi, there has not been major involvement but an important First Nations cultural atlas has been completed.

Provincial Involvement

- We found a variable level of commitment to the Model Forest Program by the provinces. The Model Forests must seek ways to pursuade the provincial governments to buy into the program of activities and outputs of the Model Forests, for the program to achieve maximum impact on forest management decision-making. This could range from simply a willingness to accept and support the Model Forests' experimental approach to financial support. Without

this, the Model Forests can do little more than attempt to persuade forest product companies and other land managers to adopt sustainable forest management practices, even if they are not necessarily required to do so by their ownership or lease/license requirements.

Research

- Research has been a major focus of the early years of the Model Forests. We estimate that almost 60% of Model Forest project activity can be classified as research, broadly defined.[4] This is the result of recognizing information gaps that needed to be filled to move along the sustainable development path. It may also be related to the tendency already noted to fund projects promoted by partners to retain their interest.

- In spite of the research focus, the Partners in Sustainable Development programs, aimed at an accelerated and enhanced forestry research program and enhanced information gathering and bio-monitoring, played only a minor role in the Model Forests. Most Model Forest participants were unaware of these programs and their intended links with the Model Forest Program.

Peer Interviews

- The majority of peer interviews were conducted after the completion of the site visits. By and large, they served to validate the findings of the other research methods used to complete this evaluation. The interviews confirmed:

  - The Model Forests have been inward looking and knowledge of their activities and specific outputs are not widespread by others in the Canadian forestry industry;

  - The Program has not had a major impact on forestry operations outside of the boundaries of the Model Forests nor have they greatly influenced provincial policy.

  - While the Program is the major player, it is not the only industry/government initiative designed to contribute to sustainable forest management in Canada.

  - The Program has played a role in demonstrating to international concerns that Canada is moving toward sustainable forest practices.

  - Model Forests have developed partnerships and consultation processes that are more advanced than elsewhere in the industry.

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4 We note that Model Forest stakeholders tend to use the term 'research' to refer to a wider arrays of activities (covering social and economic issues as well as scientific questions) than is usually included in the conventional sense of scientific, laboratory-based research.

4.0 THE EVALUATION QUESTIONS

This section contains the responses for the 18 evaluation questions of the Model Forest Evaluation.[5]

1. Is there General Agreement across the Network of Model Forests as to what constitutes Sustainable Development?[6] (2)

Conclusion

- **All ten Model Forests have acquired a broad understanding of sustainable forest management, and have written it down in the form of a vision statement or broad objectives.**
- **All statements contained elements which incorporated multiple social, economic and environmental values into a framework which projected into future generations.**
- **We found no evidence that the Model Forests have reached general agreement on what constitutes sustainable development.**

INTRODUCTION

The term sustainable development has been evolving and can be as all-embracing as are definitions of some of the world's great ideologies. Through our site visits we discussed with Model Forest staff and Board of Directors what statement of sustainable forest management they circulated to partners and others. We also asked how they had modified their understanding of the concept since the inception of the Model Forest and what role it played in the implementation of projects and activities.

FINDINGS

All ten Model Forests have acquired a broad understanding of sustainable forest management, and have written it down in the form of a vision statement or as a broad objective. All statements contained elements which incorporated multiple social, economic and environmental values into a framework which projected into future generations.

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5 The questions are numbered consecutively in this report in a different order from in the terms of reference. The terms of reference question number is given in brackets () after the question is stated.

6 The 1987 "Brundtland" statement of sustainable development dealt with meeting the needs of today without compromising the ability of future generations to meet their own needs. There is general agreement that sustainable development integrates three dimensions: economic, environmental and social. (Sometimes environmental is replaced by eco-system.) Some place primacy on the environment, as it is subject to physical limits, while the other two are subject to the limits of human creativity. Forest use inevitably alters the forest composition. Wood will be harvested as long as it provides goods, services, and satisfying livelihoods to people - but four main issues have come to the fore in recent times: stakeholder participation in planning and decision making; sustaining both timber and non-timber forest values; livelihoods in forest-dependent communities; and land zoning for shared, exclusive or predominant use.

Most of the statements were general. Some Model Forests spent several months struggling to produce more detailed definitions - a process which increased their understanding of the concept while demonstrating that a final definition was probably not to be found. Vision statements and objectives were periodically reproduced in newsletters, and participants felt they understood the concept without necessarily being able to recite it verbatim.

> **"The guiding vision of the Fundy Model Forest is to ensure ecological sustainability of the forest while maintaining the social and economic benefits forests provide."**
> *- Fundy Model Forest*

Much of this developmental work was done within each Model Forest. General Managers of each Forest were able to exchange notes, and some partners discussed the concept of sustainable forest management, at periodic Model Forest Network meetings, even though the Network did not play a strong role in disseminating information or promoting any single view of the concept. Some Model Forests have revisited and improved their Objectives, especially where an influx of new partners has brought new values to the table. Several individuals within Model Forests also professed an increased understanding through meetings and discussions of what sustainable forests were all about, and a widening appreciation of other people's values.

In some cases, but not all, the statements of sustainable forest management played a central role in the development of projects within each Model Forest. In other cases, however, projects appeared driven by a proponent's individual interests and not by the statement of sustainable management. Some had developed specific criteria against which to evaluate project applications, while some tried to link them specifically to their forest management plans, and others reviewed proposals for their contribution to the overall goal. In the first year or two of the Model Forest Program, generally speaking, indicators of progress were not specified in advance of the project start-up, though most projects and program areas were subject to a year-end review of progress. As the program moves into its fifth year, almost all Model Forests are working to develop indicators of progress.

> **"Develop the systems, technologies, knowledge base and processes by which to enhance integrated resource management and achieve the sustainable development of forests and their many resources."**
> *- McGregor Model Forest*

2. Have commonly accepted measures of Sustainable Development been agreed to and are these being reported against? (16)

Conclusion

- **The general answer is no, not yet.**
- **Model Forests have made progress in recognizing which values need to be measured, and each Model Forest is evolving in its own direction, developing its own measures and indicators to reflect the local situation.**

INTRODUCTION

"You put back what you take from the forest, and what you take, you take very carefully."
- Model Forest Stakeholder

In recent years, a cascade of visions, strategies, principles, codes, Model Forests, certification schemes, and in particular, indicators, have sought to make sustainable development an operational concept in forests. *Economic indicators* are well established and are in need of overhaul. For example, depleting forests would actually count as an addition to GDP. Indicators of *social impact* are not difficult to find. *Environmental indicators* are more difficult, because many of the complex interactions at work are just not known. Even more problematic is the integration of these three sets into a true set for sustainable development. Through our site visits and by reviewing Model Forest Annual Reports, we developed our analysis for this issue.

FINDINGS

"Sustainable Development must be defined for each Model Forest, rather than a broad definition commonly accepted."
- Model Forest Stakeholder

The general answer is no, not yet. Model Forests have made progress in recognizing which values need to be measured, and each Model Forest is evolving in its own direction, developing its own measures and indicators to reflect the local situation. In Eastern Ontario, for example, the Model Forest Science Committee spoke of a need to relate the indicators to local Model Forest situations. A benchmark study on social values is currently underway among landowners. Currently, Model Forests are doing no work across the Network to develop commonly accepted measures. Many Model Forests have, however, developed strategic plans and for the most part they are reaching the point where their information base obtained from early projects can be incorporated into a forest management decision support system. Several respondents emphasized that sustainable development must be defined for each Model Forest instead of a commonly accepted broad definition.

"The world is having a difficult time developing indicators, we shouldn't expect it to be any easier for Model Forests."
- Model Forest Stakeholder

The evaluation team noted that many countries and organizations were in similar early stages in deriving measures and indicators, and Canada's Model Forest Network was certainly not alone in its efforts. Canada's 1992 Forest Sector Strategy contains several indicators which are routinely monitored. Canada also led the way at the 1994 Montreal Conference for Security in Europe, which dealt with indicators in northern forests, and published a list of indicators grouped into six main

areas: Conservation of Biodiversity; Maintenance and Enhancement of Forest Ecosystem Condition and Productivity; Conservation of Soil and Water Resources; Forest Ecosystem Contributions to Global ecological Cycles; Socio-Economic Indicators; and lastly, Societal Indicators. More recently, the Canadian Council of Forest Ministers has published *Defining Sustainable Forest Management, A Canadian Approach to Criteria and Indicators*. The Canadian Standards Association (CSA) and the Forest Stewardship Council (FSC) have also begun to develop schemes to certify that a forest area, or the wood produced from it, is managed in a sustainable way. The CSA process is aligned with the ISO 14,000 family in that it emphasizes the process of good environmental management, and requires public participation in setting goals and indicators for sustainable forest development, without specifying at present what those goals should be. The FSC initiative places more emphasis on forest performance goals. While some stakeholder groups contribute to both initiatives, neither can be said to fully represent all stakeholder views.

"A forest for seven generations."
- Model Forest Stakeholder

Lastly, the evaluation team noted that the Network and individual forests reflected characteristics common to many new organizations as they go through an evolutionary process of formation, mission identification, performance indicator development, and implementation. The additional dimension of multi-stakeholder participation also meant that the creation of effective partnerships was a crucial prerequisite to the process of shifting to sustainable forest management - a necessary development of social capital. The evaluation team regarded the building of this trust as an essential measure of success in itself.

3. Are the objectives of each Model Forest clearly stated and consistent with the objectives of the Canadian Model Forest Program? (7)

Conclusion

- In nine Model Forests, the current objectives are clearly stated and still capture the spirit of the original proposal; there has been some evolution of objectives as people began to understand better the nature of the multiple values in the context of their Model Forest.
- We find that the objectives of each of the Model Forests are consistent with the Model Forest Program objectives. With varying degrees of emphasis, the Model Forests have made commitments to carry out a range of activities that cover environmental, social and economic issues pertinent to improving Canada's capabilities to conduct sustainable forest management.

INTRODUCTION

This question has two parts: one concerns the clarity of the wording of Model Forest objectives; the other concerns how compatible or consistent Model Forest objectives are with those of the Model Forest Program.

FINDINGS

Clarity of Objectives

We examined the objectives of each Model Forest for their clarity and their consistency with the Model Forest Program objectives. To do this, we looked at objectives as stated in the Model Forest's proposal, as possibly restated in its Contribution Agreement and as given in other documents such as a strategic plan, or similar a planning document, or in an evaluation framework (which tends to summarize existing statements rather than give new statements of objectives).

To test clarity, we posed the following question: does each Model Forest have a written statement of objectives that are easily understood and convey clearly what it intends to do and produce (deliverables)? We also looked for a clear logical link running from a Model Forest's Vision to its Goals, and then to its Objectives, Strategies, Activities and Deliverables.[7] All ten Model Forests have a written statement of objectives in their proposals. Another statement of objectives is also contained in each Model Forest's Contribution Agreement. Six of the ten Model Forests have prepared some type of strategic planning document that gives another statement of objectives. Our examination of these documents leads to the following observations:

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7 The Model Forests use terms such as Vision, Goals, Objectives and Strategies to describe their intended activities. The use of these terms is not consistent across the Model Forests, i.e., what one model forest calls a goal, another may call an objective. So, the logical linkages are described using different terms across the Model Forests. We examined each Model Forest independently for this question, and thus do not attempt to reconcile the different use of terms. We are using the term objective (not capitalized) in a broad generic sense in this discussion.

- In nine Model Forests, the current objectives are clearly stated and still capture the spirit of the original proposal; there has been some evolution of objectives as people began to understand better the nature of the multiple values in the context of their Model Forest and what the original objectives actually meant. The changes that did occur were mainly along the lines of scaling down expectations to reflect approved budgets which were substantially smaller than those submitted in their proposals, and refocussing their strategy as they became more aware of time lines for Model Forest activities. In the other Model Forest, Long Beach, a clear written statement of objectives exists but the objectives have changed substantially from the original proposal. (This is discussed further below.)

- Changes in the details of the objectives for the nine Model Forests have been mainly in the area of social and economic issues, which were given greater emphasis on the technical focus on DSS requirements, and on communication with the public about Model Forest activities. Many people did observe that up to now, the Model Forests had few substantive results to communicate and were better advised to wait for a growing communication effort; in this sense, the greater emphasis on communications reflects maturing of the Model Forests.

Consistency with Model Forest Program

To put the question of consistency in context, it is useful to note that the Model Forest Program was set up to assist forest managers in Canada to develop and implement ecologically sound and scientifically advanced management practices. The Model Forests were intended to demonstrate, both nationally and internationally, sustainable development in forestry and the management of forests for a broad range of values. These ideas are summarized in the Model Forest Program's three objectives (see Section 1.0). Our test for consistency was to ask: if achieved, will the Model Forest objectives lead to the creation and dissemination of information that will promote on-the-ground changes in forest management that will contribute to the achievement of the Model Forest Program objectives,[8] in the sense described above. Some of the specific evidence we looked for included:

- A long term commitment to sustainable development (explicit or implicit) beyond the term of the Model Forest Program;

- Specific objectives for social, environmental and economic benefits;

- Systematic management for multiple values;

- Research contributing to the support of best management practices and sustainable forest management; and,

- A commitment to disseminating Model Forest findings both within and outside the Model Forest.

In this sense, we find that the objectives of each of the Model Forests are consistent with the Model Forest Program objectives. In other words, with varying degrees of emphasis,

8 We note that the Model Forests do not have a direct mandate to manage forests. Instead they must make their contribution by producing new ideas or information that the land managers can then put into use, and by promoting their implementation.

the Model Forests have made commitments to carry out a range of activities that cover environmental, social and economic issues pertinent to improving Canada's capabilities to conduct sustainable forest management.

To test our views on clarity and consistency, we used the site visit interviews to probe in two areas: Have the objectives of the Model Forests changed since the original proposal? Do the objectives still reflect the spirit of the original proposal?

- There was widespread agreement amongst those interviewed in the nine Model Forests noted above that the intent of their objectives has not changed from what was stated in their proposal. In several Model Forests, the interviewees indicated that there had been a change in emphasis (e.g., by placing more emphasis on socio-economic issues, tourism and recreation, Aboriginal issues and communication or public awareness). For the nine Model Forests, however, there was a strongly held view that their current objectives still reflect the spirit of the original objectives. Such changes that have occurred are more an evolution of the details rather than a fundamental change.

- Long Beach Model Forest is the exception. The vision in the original proposal was to "demonstrate sustainable development through planning the use of the timber resources while considering the requirements of the non-timber resources and the needs of all forest users". The emphasis in the proposal was clearly placed on the timber resource. Now, the emphasis has changed to how natural disturbances, Aboriginal and other land use, and climate change affect key ecosystem processes at the stand and landscape level in the forest/oceanic ecosystems, and how ecosystem status affects social, cultural and economic structures. In other words, the emphasis has shifted to focus on a broader range of ocean interests and ocean–forest interaction. This includes an increased emphasis on social and economic issues, particularly First Nations issues, and on a strong bottom up planning approach, where the needs of the communities in the LBMF drive the sustainable development agenda.

In our view, this change must be considered in the context of the socio-political environment in which Long Beach Model Forest operates:

- The Clayoquot Sound area has been the subject of intense protest over past logging practices, and there is a legacy of strong feelings regarding forest management (both pro- and anti-logging) in the area;

- The introduction of the British Columbia Forest Practices Code and other forest management measures have changed the rules of forest practices and operations dramatically;

- The establishment of the Central Region Board as an area planning authority following the signing of the Interim Measures Agreement (IMA) between First Nations and the Government of British Columbia in 1994, created a new planning authority for forest management in the area which contains the Long Beach Model Forest;

- Implementation of the recommendations of the Scientific Panel for Sustainable Forest Practices in Clayoquot Sound will add another, as yet unspecified, regulatory layer affecting forest planning, management and operations in the area.

Throughout all of this change, the Model Forest was attempting to get formally established. This finally took place in September 1994 when the First Nations were able to participate fully in the Model Forest following the signing of the IMA. Over the 1992 - 1994 period, the composition of the people involved with the Model Forest changed; some partners dropped out, and new ones joined. In one instance, a critical change involved the withdrawal of active participation of the industrial partners who retain only nominal involvement.

"In the case of our Model Forest, it was a very hard part of the job to get the people to work together (very political location). Half the people don't want to cut a tree and the other half wants to clear out the whole thing. So we had to draw a halfway line to work together. That took time but it looks like we are finally on our way."

– Model Forest Stakeholder

All things considered, the fact that the objectives changed should not be surprising. Change was probably inevitable and is in many ways a reaction to events. It may also be seen as an attempt to respond better to the wishes of the local communities and individuals that now comprise the Long Beach Model Forest partnership.[9] Indeed, one result of the multiple planning processes now affecting the Clayoquot Sound area is a substantial reduction in the Annual Allowable Cut, followed by an immediate reduction in the harvest levels and considerable job loss. In the Ucluelet area alone, approximately 300 workers have apparently lost their jobs as a result of reduced harvest operations. In effect, this makes the Model Forest's current choice of objectives, focusing largely on the non-timber parts of sustainability, both reasonable and relevant.[10]

9 However, it was clear from the interviews that satisfying everybody's wishes, as they currently stand, is an impossible dream; the views held are too disparate and firmly entrenched.

10 However, it is only fair to note that some people in the area object very strongly to this approach.

4. Are the objectives as laid out in each Model Forest Agreement being achieved? (8)

Conclusion

- **There is a strong belief among the Model Forests that progress is being made towards achieving their objectives. However, there is also an equally strong belief that it is too early to tell.**
- **Building trust among the partners was, and remains, an important prerequisite to launching and building a successful Model Forest Program. The partnerships appear to be solidly in place in nine Model Forests.**
- **Generally, as might be expected, progress has been modest in actually applying Model Forest project results.**

INTRODUCTION

To respond to this issue, as part of our site visits, we discussed objective achievement with both Model Forest staff and representatives of the Board of Directors. Our findings are summarized below under the heading, General View. In addition we developed a more detailed review process based on a six step sequence describing the forest management process outlined in Section Two. Our findings are reported under the heading, A Structured View.

FINDINGS

General View

The interviews revealed a strong belief among the Model Forests that progress is being made towards achieving their objectives. However, there was also an equally strong belief that it is too early to tell. Many people who expressed this view believed that it will take much more than five years before the results of projects can be applied. Thus, although some important projects have been completed, for most Model Forests the key indicator of objective achievement rests with project results that are due in the final year of the program and in their adoption by forest managers. This may mean that the evaluations that all Model Forests are to carry out, some of which are about to commence, will be conducted too soon to offer definitive evidence on objective achievement.

Some additional observations include:

- Each Model Forest can cite a list of projects completed or in progress that appear to contribute to achieving their objectives as presently stated. What cannot be seen yet is how well the project results will fit together into a coherent package that will make a significant contribution to Model Forest objectives and Model Forest Program objectives.

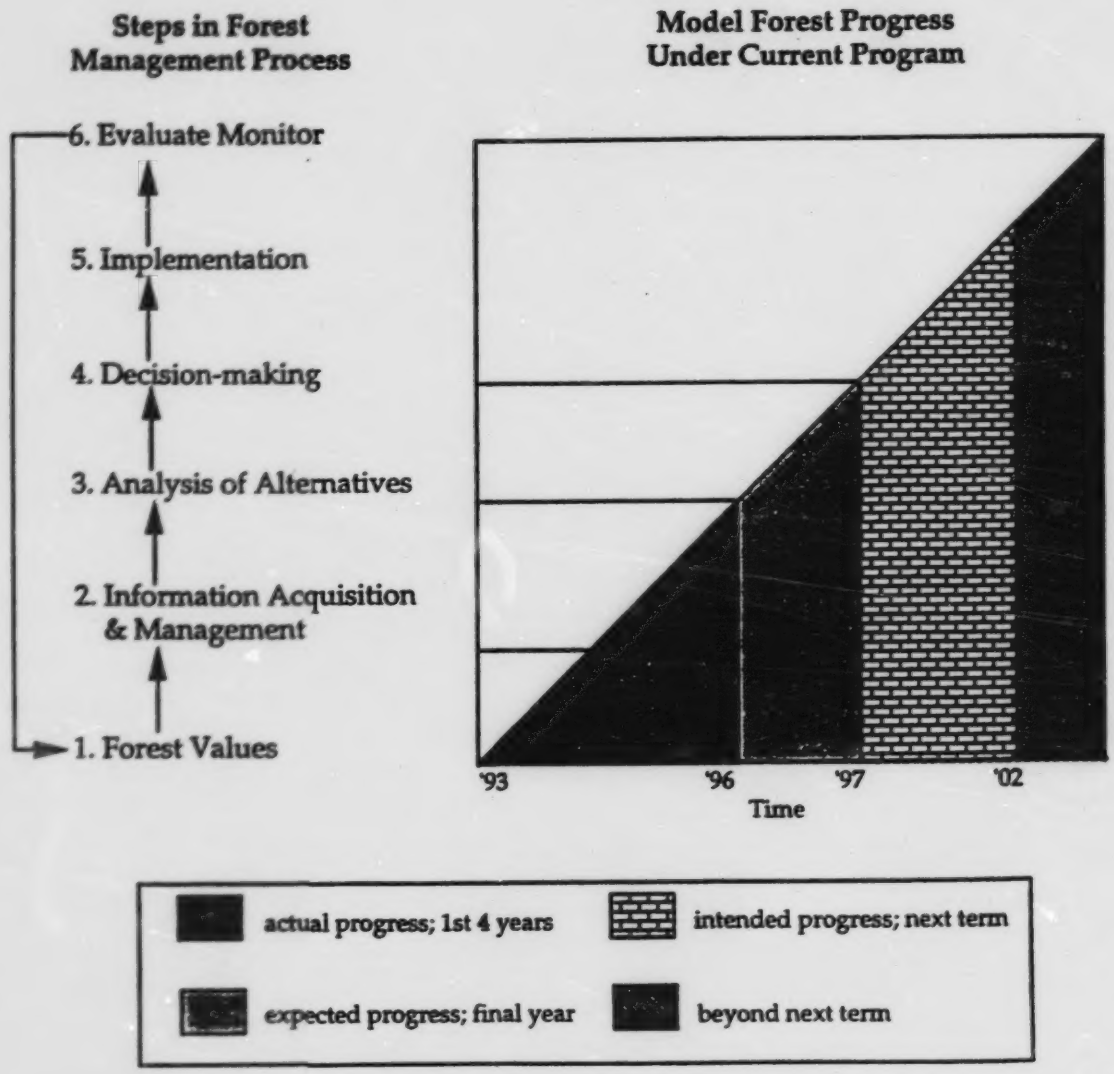
- We could find little evidence of formal mechanisms designed to measure progress towards objective achievement. One exception is the EOMF Science Committee which has the explicit mandate to measure project progress toward objectives. Project reports are required to include statements assessing progress toward objectives. There is however a variety of other mechanisms in place: projects are reviewed at the Board level at both the proposal stage and during implementation. Some Model Forests have a Project Committee or Science Committee charged with review of proposals and monitoring of progress; most have had an evaluation framework completed and plan to have an evaluation completed in 1996. Only a few Model Forests could be said to engage in systematic review of objective achievement on a regular basis, although there is a stated requirement for an annual review in the Agreements.

- For us an important question was, will the Model Forests make an incremental contribution to the shift to sustainable development even if they achieve their objectives? It is a strongly held view of many interviewees that the Model Forests catalyzed action that would not have happened without them or, at least, hastened the development of innovative practices by as much as 5-10 years. A major factor has been the Model Forests' ability to bring together people with widely divergent views, and over time, achieve a partnership who agree over a wide range of goals and objectives for their Model Forest. It is acknowledged that broad pressures are operating to push forest management in the same directions as the Model Forest Program. The Model Forest Program contribution has been to speed up the process and make it work more smoothly through the partnership approach.

A Structured View

With this general view as background, we developed a more detailed review process based on the six-step sequence describing the forest management process outlined in Chapter Two. Our process was to apply a modified version of that sequence to review objective achievement by the Model Forests. The following six-step sequence presents our view of the steps each Model Forest will pass through in implementing their plans to improve sustainable forest management. Figure 2 shows our view of the actual progress to date and future progress to the year 2002.

Figure 2
Schematic of Forest Management Process and Model Forest Progress (actual to 1996; forecast to 2002)



1) Formally establish a multi-stakeholder process. (The Model Forest management partnership).

This was a much slower process than most people originally thought. Certainly, the Model Forest Program planning documents appear to assume that the required partnerships would already be in place and ready to commence work at the signing of the Agreements. This was not the case. Building trust among the partners was, and remains, an important prerequisite to launching and building a successful Model Forest Program. This took time, generally one to two years according to the participants in the Model Forests. The partnerships appear to be solidly in place in eight Model Forests now, while recent activities in the other Model Forests offer promise for strengthening their partnerships. Sometimes it appears that the partnerships restrict the real decision-making to a small, tightly knit sub-set of the partners. Consequently, in some Model Forests, there is a need for greater transparency and openness in decision-making involving a wider cross-section of the partners. The EOMF is a striking exception to this, however. Respondents from EOMF spoke strongly about local empowerment and consensus through the partnership on the Board.

Encouraged by the Mohawk community at Akwesasne, the EOMF adopted "A Forest for Seven Generations" as its view of sustainable development. Decisions are made by consensus taking into account seven generations from great grandparents to unborn generations. The challenge for each management decision is to learn from the past and to consider the future.

2) Improve existing database (information collection, including research).

Work is progressing in this area but much remains to be done. Data collection and data generation has been and is emphasized across the Model Forests. This covers all three of the bases for sustainability: ecosystem, social and economic (including timber) data, in varying degrees by Model Forest. Entry of this data into GIS or other components of a DSS (where one is being built, e.g., the Brass Ring at McGregor or the DSS framework at Foothills) is also progressing. This work has suffered initially in some Model Forests which did not have a strategic plan to guide project selection and focus activities in priority areas.[11] We found definite indicators of improvement: strategic plans have been prepared and the project selection process has been made more rigorous and more focused on Model Forest objectives. The result has been steadily improving linkages between information needs and projects. We also detected evidence that the quality of applications or project proposals is much better now than it was in the beginning.

Research

Research can be defined narrowly to include only basic scientific research conducted in or from a laboratory setting by a CFS or university researcher. It can also be defined more broadly to include the narrow definition as well as, for example, applied forest research in the field ranging from harvesting techniques to eco-system topics, data collection, model building of various types (possibly meant to feed into

11 There are exceptions to this statement. One Model Forest effectively held back project selection until it had completed a detailed planning process. Another one had built its proposal on a long history of activity in its area and was able to follow its proposal with little deviation.

a decision support system framework) and socio-economic studies.[12] In the Model Forests, it is clear to us that the broad view of research applies. The Model Forests have conducted a wide array of projects in areas such as Aquatic Resources, Biodiversity, Conservation, Decision Support Systems, Ecological Processes, First Nations, Forest Practices, Inventory, Socio-Economics and Wildlife[13]. Based on the Status Reports, which cover activities to the end of 1994/95, the Model Forests had a total of 420 projects underway or completed. Of these, we estimate that about 60% would be classified as research activities under the broad definition of research. For this reason, we believe that research activities have been an important focus of the Model Forests.

3) Develop an integrated resource management planning process to accommodate multiple interests and evaluate trade-offs.

> "The Model Forest is in its last year of which we plan to develop an IRM plan. Until this happens and real trade-offs take place, it is too early to assess the effectiveness of the MF, the sincerity of the partners, the commitment to objectives, and consequently, what financial support would continue if CFS backs out."
> – *Model Forest Stakeholder*

Individual Model Forests are making progress towards the development of integrated resource management plans.[14] This is demonstrated in different ways including: planning and building formal computer-based Decision Support Systems; developing an eco-system-based management approach; collection, assimilation and analysis of wildlife inventory and habitat supply information; and collection and analysis of social, cultural (including Aboriginal history) and economic information on the Model Forest. Across the Model Forests, the level of progress varies, as summarized below:

- one is actively engaged in evaluating trade-offs;
- some are about ready to apply decision support tools to trade-off analysis; and,
- others still require further development of their planning process.

Underlying this step is a concern that the Model Forest partnership does not have collective responsibility for the management of the forest estate. The Model Forests can however play a role in advising local land managers, and demonstrating what could be done.

12 We note that applying different definitions of research, or examining spending as opposed to the number of projects, could lead to different views on the importance of research. The objective here is to show whether or not research was an important activity in the context of the forest management process introduced previously, rather than pin down exactly how much and what type of research was conducted.

13 This list is not exhaustive. It excludes areas such as Communications, Education and Public Involvement where one would not find (or at least expect to find) research activities.

14 It is of course uncertain at this time whether a Model Forest will ever have the responsibility/authority to develop or implement the IRM plan per se, but it should at least develop the IRM planning process to accommodate multiple interests and evaluate trade-offs. The same argument applies to the next step. The Model Forest should evaluate decisions based on trade-off analysis and transfer the information to appropriate management agencies (technology transfer).

4) Make decisions based on trade-off analysis and transfer the decision to appropriate management agencies (transfer technology)

For the Model Forests, this must be interpreted as making use of information and analytical tools they have developed in land use management decisions.[15] Some of the DSS tools being built are not yet at the implementation stage, but should be available for analyzing real forest management decisions within the next year. In a less formal sense, the Bas St.-Laurent Model Forest has demonstrated good progress on multi-value land use decisions by making use of pre-existing social capital in the area, a history of partnership among participants, and the pattern of woodlot ownership. There are some good examples of the application of Model Forest developed approaches or techniques. (For example, predictive ecological classification software developed jointly by the FHMF and the Alberta Research Council, is also being used by Weldwood (the industrial partner). A complete slope classification of the FHMF (produced as part of an Environmentally Significant Areas study) is being used operationally by harvest planners and managers in evaluating areas for harvest operations, the cut-to-length system of logging tested in the Manitoba Model Forest has been adopted by its industrial partner, Pine Falls Paper Company; and the Corridor Selection Harvesting project in the Lake Abitibi Model Forest has led to the implementation of selection logging techniques by Abitibi-Price). Generally, though, progress is modest is this area because the Model Forests are just beginning to create the tools necessary to participate in real trade off analysis and decision-making.

5) Monitor the process

Generally, we found that formal monitoring processes have not been implemented, but it is premature to expect a high level of this activity given the stage of development of the Model Forests. Still, there has been some monitoring activity such as a forest audit, a public opinion survey and a snow mobile trail evaluation. The Model Forests are also planning to have evaluations done of their own programming and activities.

6) Communication[16]

There is good communication within Model Forest partners and staff, and between Model Forests at the General Manager level. At other levels, such as between project participants, we found that communications were spotty: some project proponents had contacts in other Model Forests, others did not. The Model Forests have all developed communication plans that lay out how they plan to disseminate Model Forest information to the broader public (local community, the surrounding region, the province, national and international audiences) and to peers and colleagues outside the Model Forests. Generally this is an area where success has been slow to develop. It is now recognized that a higher level of effort is required. Many of those interviewed admitted that the communication task is proving to be much more difficult than they originally expected. Another important factor is that in their early years the Model Forests had no substantive message to convey about accomplishments besides a message about their objectives. Our interviews with peers

15 It should be recalled that a Model Forest itself can only assist in making such decisions since it is not directly a land manager.

16 We note that communication as a defined activity will actually start as early as step two and would continue while the Model Forests progress through the subsequent steps.

of the Model Forests also confirmed that Model Forest information is not getting out to the broader public.

5. How has each Model Forest been instrumental in the movement from sustained yields to sustainable development? (10)

Conclusion

- **The primary evidence of movement from sustained yields to sustainable development is the extensive partnership structure based on consensus decision-making that has been implemented in every Model Forest.**
- **Much of the Model Forest activity has been related to formation of partnerships and conducting research or other information gathering projects.**
- **Application of Model Forest findings by the partners has been limited.**

INTRODUCTION

This question was explored in detail during each Model Forest site visit. A number of sub-issues were developed that essentially acted as indicators of progress in the movement to sustainable development. Also, three different questions from our Stakeholder Consultation process provided input to our analysis of this issue. Our findings are presented below on a general program-wide basis.

FINDINGS

The primary evidence of movement from sustained yields to sustainable development is the extensive partnership structure implemented in every Model Forest. Consensus-based decision-making, with the associated breadth of perspectives being considered, has created an enhanced awareness and acceptance of multiple values to be considered when managing forests. Most of this shift has been felt only within the Model Forest, with little impact on surrounding areas.

Our site visit interviews showed that Model Forest staff and partners were satisfied with the amount of progress made within their Model Forest, although many expressed concern that progress had not been as great as they had hoped. Many projects, such as wildlife habitat plans or modified forest harvesting practices, were behind timeline expectations. Most Model Forest staff and partners felt their accomplishments related more to the process and planning activities, than to actual forestry operations. Specific objectives have often not yet been met, and the slow decision-making processes might prevent some Model Forest objectives from being met by March 1997.

Application of Model Forest findings by the partners has been limited. Many of the projects are just now showing results, so adoption of these is premature. Nevertheless, we saw several examples of increased public and interest group involvement in industrial planning activities. In one instance, the industrial partner in the Prince Albert Model Forest formally included other Model Forest partners in the harvest planning process for a portion of their license known as the Bull Moose area. Some industrial partners were already using environmentally sensitive operating practices before the Model Forest was established, and claimed little impact on their practices as a result of

Model Forest activities. One company, however, has accelerated the use of modified harvesting as a result of its involvement in the Model Forest. Some industrial partners actually advocated more rigourous rules on the Model Forest than they imposed on their own areas. Some environmental partners were reluctant to be seen endorsing even modified harvesting practices. Partners reported greater acceptance and application of sustainable development concepts, particularly as these related to consultation and multiple perspectives.

Sub-Issues

To develop our analysis further, we have explored a number of related sub-issues. Also, three of the questions from the Stakeholder Consultation questionnaire provide evidence related to this evaluation issue. Our findings for each of the sub-issues are summarized below.

How well are the Model Forest operations demonstrating multi-disciplinary management of the variety of forest uses?

The Hayward Brook Watershed study in Fundy Model Forest, a multidisciplinary, multi-year study, examines the ecological uniqueness of riparian zones and the impacts of their alteration on both the terrestrial and aquatic environments. Its results will help to design forest management guidelines.

Multi-disciplinary management of forest uses started for most Model Forests with a broad set of perspectives among Board members. Consensus and compromise were largely used to select priorities and projects. Many partners stated they did not cooperate with their partners before the Model Forest was started, but they will continue to cooperate with these partners even if the Model Forest Program is not renewed.

Consensus-based decision-making was slow to start up in all Model Forests, due often to residual mistrust from years of confrontation (for example, the "Unholy Alliance" in the Eastern Ontario Model Forest among the Mohawks, OMNR, and DOMTAR). This mistrust has largely been overcome.

As shown in Table 1, respondents to the stakeholder questionnaire expressed *agreement*[17] when asked if they agreed that their Model Forest had demonstrated forest management involving a wide variety of stakeholder values. Stakeholders also expressed *agreement* when asked if they agreed the Model Forest had demonstrated forest management using a wide mix of disciplines.

17 See the Appendix for a discussion of the interpretation of the stakeholder consultation results.

Table 1
Stakeholder Consultation on Model Forest Contribution to Shift to Sustainable Forest Management

4. The following statements describe various ways the Model Forests could contribute to the overall objective of moving from a sustained yield to a sustainable development strategy of forestry management. Please indicate the extent of your agreement or disagreement with the statements: 1 = Strongly Disagree 5 = Strongly Agree	Average Response
The Model Forest has demonstrated forest management involving a wide variety of stakeholder values.	3.7
The Model Forest has demonstrated forest management involving a wide mix of disciplines (e.g. foresters, biologists, ecologists, economists, sociologists, First Nation forest knowledge, etc.).	3.9
Compared with non-Model Forest areas, the latest in modern management techniques are being used in our Model Forest.	3.5
There have been links established between our Model Forest and various agencies that conduct scientific forest research.	4.3
These links have ensured only the most relevant research is being conducted.	3.5
These links have ensured that top quality research projects are being completed.	3.7
I am confident that the research results will directly influence future forest management techniques.	3.8
Our Model Forest has successfully transferred new technology related to sustainable development to forest managers.	3.3
Our Model Forest is using landscape planning techniques as part of its overall forest management system.	3.6
Our Model Forest area has experienced greater economic development than it would have if the Model Forest had not been established.	3.4
Information about our Model Forest activities is being circulated widely.	3.6

Note: See the Appendix for a discussion of the interpretation of the stakeholder consultation results and for the distribution of the responses across the response categories.

Are the latest modern management techniques being used? How do they compare with other non-Model Forest areas?

Several Model Forests have focused significant parts of their programs on sophisticated forest planning systems, using GIS and simulation modeling to project forest development and assess potential impacts. Some emphasis has also been placed on field demonstration of modified operational practices, such as selection harvesting systems.

Respondents to the stakeholder questionnaire expressed *agreement* when asked if they agreed that their Model Forest as compared with non-Model Forest areas, used the latest in modern management techniques.

Has relevant scientific research been enhanced? Have the links between the Model Forests and related scientific research been established? How are the links operating?

This sub-issue is dealt with in greater detail under Question 12.

Several Model Forests reported strong linkages to CFS and University researchers, through Model Forest projects and occasionally through Board or committee membership. Some Model Forest staff suggested the program had contributed to a greater interest in forestry-related topics by some academic researchers not previously involved with forestry.

The stakeholder questionnaire probed a number of questions related to research activities. Respondents expressed *strong agreement* when asked if their Model Forest had established links with various agencies that conduct scientific forest research. The respondents were also in general *agreement* that these links have ensured only the most relevant research is being conducted. They were also in *agreement* the links will ensure that top quality research projects are completed. Similarly, on average *agreement* was expressed when asked if the research results will directly influence future forest management techniques.

What examples of technology transfer can be attributed to the Model Forests?

Corridor Selection Harvesting

The corridor selection or Corridor Selection Harvesting system can lower the rotation of black spruce growing on a peat land site by as much as 40 years or more depending on the amount of larger black spruce residual protected during harvesting. The combination of larger residual and smaller advanced growth in the untraveled corridor and natural seeding along the travel corridor creates an uneven aged stand structure which not only shortens the rotation period but is more visually appealing immediately after harvest, as compared with conventional clearcutting. Preliminary results in the Corridor Selection Harvesting trial have led to the implementation of selection logging techniques in the normal operations of Abitibi-Price.

Some Model Forests have active outreach or technology transfer programs, involving brochures, handbooks, and field guides. These are primarily directed to local or regional users, usually members of the general public. Few examples of technology transfer to forest industry were reported. Respondents to the stakeholder questionnaire expressed *weak agreement* when asked if they agreed that their Model Forest had successfully transferred new technology related to sustainable development to forest managers.

Has conservation of the integrity of the forest landscape been enhanced?

All Model Forests showed general awareness of landscape management issues. Those with active DSS projects hoped to build landscape assessment and design components into their planning systems. Respondents to the stakeholder questionnaire expressed *agreement* when asked if their Model Forest is using landscape planning techniques as part of its overall forest management system.

Is the Model Forest area contributing more to economic development now than if it had not been a Model Forest?

Local economic development impacts of the Model Forests vary substantially. Eastern Model Forests, where private woodlot forestry is a concern, had a larger community impact than most western forests, where most of the Model Forest area was crown land under long-term tenure with large industrial operators. Respondents to the stakeholder questionnaire expressed *weak agreement* when asked if their Model Forest was experiencing greater economic development than it would have if the Model Forest had not been established.

Métayage is the name given to tenant forest farming in the Bas-Saint-Laurent Model Forest. A métayer operates 1,000 hectares of forest land, rented from a forest company and makes from $10,000 to $30,000 per year, after $16,000 expenses, and about $6,000 rental to the company (which is returned to the Model Forest). The métayer works full time, and can hire one helper if needed. Most rent their machinery, as they cannot afford the capital cost. Each métayer must prepare a forest management plan, use no pesticides, and clearcut no area greater than 4 hectares. The twenty six métayers in the Model Forest have formed a cooperative to develop other products (e.g., tourism and fishing) and markets. Métayers feel responsible for their forest - a sense of belonging.

Has the knowledge gained from the operation of the Model Forests been widely disseminated?

Communication activities were significant for all Model Forests, with several Model Forests having a staff member responsible for communication functions. The focus was invariably on local or regional communication, with national and international communication expected to be facilitated through the MFN. Some novel communication projects have been attempted such as the low power FM radio station set up by the Manitoba Model Forest, in cooperation with the Forestry Branch of Manitoba Natural Resources and with help from the Red River Community College. The station provides information about Model Forest projects and Grand Beach Provincial Park activities to the large number of tourists who pass through the Model Forest. Communication plans were common, and most respondents reported an increasing priority in communications. Most Model Forest sites maintained a clipping file, containing copies of local media reports related to Model Forest activities which were overwhelmingly positive. Model Forest activities did not appear to be well known to the general public, beyond the immediate area of each Model Forest. It is troubling to note that local communities in some instances currently have a negative view of the Model Forest Program. Hopefully this can be corrected by improved communications in the future. Respondents to the stakeholder questionnaire expressed on average, *agreement* when asked if they agreed that their Model Forest had circulated widely information about their activities.

"I would especially like to thank the Model Forest and its partners for the decision to implement the Education Action Plan. A consultant was hired to develop the curriculum and to provide tours through areas within the Model Forest. This is an excellent way to educate the future generations about forest practices and sustainability."
- Model Forest Stakeholder

What impact has Aboriginal participation had on Model Forests?

As noted in Chapter 3, there has been First Nation involvement in six Model Forests. Through the Stakeholder Consultation we sought opinion on the impact of the Aboriginal participation. Table 2 summarizes our findings for three questions. For the first two questions it is important to note that about 50% of respondents stated the question either did not apply to their Model Forest or that they did not know the answer. This is consistent with the observation above that First Nations did not participate at all in four of the Model Forests. There was *weak disagreement* with the statement the Model Forest had a bigger effect on the management of Aboriginal forests than expected. There

was general *disagreement* with the statement that greater use of Aboriginal forest management approaches were adopted by other forest managers than expected. There was *weak disagreement* that non-Aboriginal Partners now understand Aboriginal issues such as history, rights and culture. Although these responses were all skewed to the disagreement side, it is important to note that when the data is examined for individual Model Forests, EOMF, PAMF and to some extent LBMF are exceptions. For these three Model Forests, respondents generally agreed with the statements.

Table 2
Aboriginal Involvement in the Model Forests

6. We are interested in your view of some possible impacts of the Model Forest Program. Do you agree or disagree with the following: 1 = Strongly Disagree 5 = Strongly Agree	Average Response
The activities of our Model Forest have had a bigger effect on the management of Aboriginal forests than I expected.	2.6
Greater use of Aboriginal forest management approaches has been adopted by other forest managers than I expected.	2.4
The non-Aboriginal Partners in our Model Forest now understand Aboriginal issues such as history, rights and culture.	2.9

Note: See the Appendix for a discussion of the interpretation of the stakeholder consultation results and for the distribution of the responses across the response categories.

Are the Model Forests Leading Edge?

By this we mean, are the Model Forests leading the way in the shift to sustainable development? We examined this issue from three aspects: by province, in terms of technical forestry issues and in terms of the consultative process.

By Province

In our view, the answer is, "It depends on the province". For example, Ontario recently completed a six-year environmental assessment of timber management in the regions of the province in which industrial operations on Crown forest land are the dominant economic activity. This includes all of northern Ontario and extends into the hardwoods forests of Sudbury–Ottawa Valley region. The decision of the Environmental Assessment Board included a number of mandatory "terms and conditions" under which future timber (= forest) management must be carried out. The impacts of this environmental assessment process have been many:

- A total revision of the Crown Forests Act with a new "Crown Forest Sustainability Act" passed in 1994.
- A whole range of new forest policy initiatives by the Ministry of Natural Resources under the "Sustainable Forestry" banner (e.g., Old Growth Forests, Community Forests).
- A range of new guidelines for management and protection of non-timber forest values.

- A totally re-drafted Forest Management Planning Manual which lays out in enormous detail all of the process and information required to write a forest management plan on Crown land. This process requires the involvement of a 10-person inter-disciplinary planning team, as well as a 10-person Local Citizens Committee for every forest management unit in the province.

- A new "Principles and Codes of Forest Practices" developed by the Ontario Forest Industries Association in 1992.

Taken collectively, these actions have moved the yardsticks for forest management dramatically in Ontario, and the Model Forest Program had virtually no influence on these changes. They were already well underway by the time the Program got started, and the provincial changes were much more comprehensive and meaningful in terms of forcing changes on the ground. The establishment of an individual Model Forest in a region already affected by these sweeping provincial changes probably has had very little incremental benefit in changing forest management and practices.[18] The same phenomenon has happened in British Columbia, driven largely by the new Forest Practices Code and new sustainable forestry principles adopted by the industry. On the other hand, as noted in Question 17, the Foothills Model Forest has had some influence on the forest conservation policy in preparation in Alberta.

Technical Issues

In terms of technical developments, we saw little in our site visits that was ahead of what is generally being developed outside of the Model Forest Program. In fact, in some cases, the initial focus on developing consensus may have slowed technical progress. There are exceptions, however, such as the spatial analysis work being done in McGregor Model Forest. In our view, and this would be shared by others in this field, this work is truly leading edge, and ahead of the non-Model Forest community in British Columbia. Another example of work that is technically leading edge would be the Ecosystem Classification work going on in both Foothills and McGregor Model Forests.

Consultative Process

Technical achievements alone will not cause the desired shift to sustainable development. Our sense is that the Model Forests have been "leading edge" in terms of process, especially in being able to establish new, effective partnerships[19] in forest management, that have not been achieved through provincial or industrial planning/management processes. The development of partnerships, and the establishment of effective consultative processes, is quite obviously more advanced within the Model Forest realm, than elsewhere. This is not surprising given the underlying objective of bringing all groups to the Model Forest tables. Ultimately, movement towards sustainable development cannot happen without such consultation. Thus, the truly seminal accomplishment of the Model Forests may be to show how to make partnerships work to bring the truly multiple-value approach to forest management.

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18 We note that what is described above applies particularly to northern Ontario (Lake Abitibi Model Forest), but it does not apply to the Eastern Ontario Model Forest because that land base is largely privately owned, and it was outside the Environmental Assessment process.

19 One could qualify this statement where partnerships are incomplete or not fully developed such as LBMF and MMF for example.

The working partnerships created through the Model Forests are achieving something that the provincial initiatives generally have been unable to do in their creation of effective partnerships.[20] In this sense, we think it follows that in the provinces that have not undergone recent dramatic change in forest management, the Model Forests generally do represent leading edge approaches to sustainable forest management. They have established 'platforms' from which to launch leading edge technical achievements if and when they are developed. However, at this point there have been few such achievements.

Stakeholder Consultation

Question 1 from the Stakeholder Questionnaire was developed by drawing on the *Model Forest Background Information and Guidelines for Applicants*. This document requested applicants to describe activities, outputs and deliverables that would support the goals and objectives of their proposal. Examples of activity areas that could contribute to achieving the overall objective of shifting forestry practices to sustainable forestry were suggested. We asked stakeholders for their views on how successful they feel their Model Forest has been conducting these activities. The results are summarized in Table 3.

20 The irony of this of course is that in Ontario and in British Columbia, there is evidence that the new provincial codes and standards are so rigorous and prescriptive that they are impeding the field testing of innovative and progressive forest practices such as modified harvesting.

Table 3
Stakeholder Consultation on Shift to Sustainable Development

1. The overall objective of the Model Forest Program is to shift forestry practices from sustained timber yield to sustainable development (sustainable forestry). Based on your participation in the Model Forest activities, how successful do you think your Model Forest has been at promoting and/or conducting the following activities to achieve the overall objective: 1 = Strongly Disagree 5 = Strongly Agree	Average Response
Producing resource inventory/data.	3.7
Using information systems (GIS, decision support systems).	4.0
Applying integrated resource management.	3.5
Doing intensive silviculture.	3.1
Applying improved harvesting operations.	3.3
Applying forest protection/integrated pest management measures.	3.0
Applying environmental protection measures.	3.3
Improved forest utilization.	3.4
Improved forest access.	3.3
Conducting research or having research conducted.	4.2
Demonstrating to others new approaches and results being achieved.	3.7
Sharing information with others in the Model Forest network.	3.9
Establishing a good working partnership to operate your Model Forest.	4.0
Creating a partnership with an appropriate mix of partners.	4.0
Educating the general public on sustainable development.	3.2
Educating the general public on the changes and activities taking place at your Model Forest.	3.3
Accelerating the implementation of sustainable development in the practice of forestry, in particular the concept of integrated resource management.	3.3
Applying new and innovative approaches in the management of forests.	3.5
Testing and demonstrating the best sustainable forestry practices using the most advanced technology and forest practices available.	3.3
Attaining the overall objective of shifting forestry practices from sustained timber yield to sustainable development.	3.3

Note: See the Appendix for a discussion of the interpretation of the stakeholder consultation results and for the distribution of the responses across the response categories.

These results essentially confirm our site visit findings. The conduct of research and the use of information systems (GIS, DSS) recorded the highest average response rates. The establishment of partnerships and sharing of information (networking) among partners also received high positive responses. The lowest responses were recorded for the application oriented activities including such things as intensive silviculture and improved harvesting and environmental protection measures.

6. Are the activities and outputs from the Network of Model Forests leading to the overall objective of shifting forestry practices from sustained timber yield to sustainable development? (3)

Conclusion

- Currently the activities and outputs from the Network of Model Forests have had little impact on the achievement of Model Forest Program objectives.
- Very little awareness of Network activities was evident beyond the General Manager level.
- The role of the Network in information exchange will grow in the future as the focus of attention extends beyond the borders of each Model Forest.

INTRODUCTION

As part of our site visits, we asked all those interviewed about their awareness of the activities and outputs from the Network of ten Model Forests. We then probed for their view on how these were leading to the attainment of the overall objective. Our findings are set out below.

FINDINGS

We found that currently the activities and outputs from the Network of Model Forests have had little impact on the achievement of Model Forest Program objectives. Model Forest partners and staff below the General Manager level had little knowledge of Network activities, particularly if they had not attended Network meetings. Interest in sharing information is, however, growing. Stakeholders felt that significant benefits could be gained from increased contact among stakeholders of various Model Forests, and that the Network could act as a facilitator in this process.

We attribute the light impact of Network activities on the Model Forest Program's goals to a number of factors. Some of these are controlled by the Network or its members while others are a reflection of the early development stages of the Model Forest Program. The nature of the activities associated with the Network (e.g., annual meetings in various parts of the country) and the limited funding for travel expenses which required individual participants to pay their own way, may have reduced the involvement in Network activities.

The draft compendium of research recently produced was the most often cited product of the Network. Stakeholders who were aware of its existence thought it was a useful tool to begin networking and expediting the shift from sustained yield to sustainable development. A number of them also indicated that it would have been even more useful in computerized database form, allowing searches using keywords. Regardless of the existence of the compendium, in many cases, we provided during site visits, the first indication to stakeholders that there were, in other Model Forests, people engaged in projects analogous to theirs. Those stakeholders who were aware of Network activities were nearly always those that attended Network meetings held in their region or

participated in conference calls. This implies that little networking was occurring by means other than face-to-face interaction. There was also little evidence that stakeholders in Model Forests used electronic media for networking or were aware of who to contact in other Model Forests and how. At least one Model Forest is not yet electronically linked to the Network.

Some stakeholders felt that the International Model Forest Program diverted energy away from the national network. The twinning process used to link Canadian Model Forests with others overseas, because it was based on competition among Model Forests, consumed time and resources and did not foster cooperation among Canadian Model Forests.

> **"When the feds started the International Model Forest Program, it was like a football player running for the goal line before he caught the ball."**
> *– Model Forest Stakeholder*

Not all factors that affect the Network's contribution to Model Forest Program goals are related to Network activities and outputs. Some are inherent to organizations in the initial stages of development. As already noted, there was an inward focus during the first two years. The emphasis was on building the structures and relationships needed to function, and on starting research, development and demonstration projects. This reduced the level of interest in activities going on in other Model Forests. During this period, there was little technical information to share, reducing the perceived usefulness of networking with other Model Forests.

The Network's effectiveness in helping the Model Forest Program achieve its objectives is not static. Discussions with various stakeholders led us to conclude that the role of the Network in information exchange will grow in the future as the focus of attention extends beyond the borders of each Model Forest. There is, for example, increasing interest in the various Model Forests in collaborating between stakeholders and paid personnel on issues of particular interest to them. Many interviewees expressed the desire for and value of meetings among project staff who have a common interest, e.g., wildlife habitat, communications. (We understand that communications and outreach personnel did meet separately at the February 1996 Model Forest network meetings to discuss specific communications issues.)

7. Are the operations of the Model Forests consistent with the elements of the National Forest Strategy? (6)

Conclusion

- We find that the operations of the Model Forests are consistent with the NFS. In particular, the overall goal of the Model Forest Program and its three specific objectives are consistent with the NFS.
- The NFS has not played a strong, overt role in either planning or in the operations of the Model Forests.

INTRODUCTION

The National Forest Strategy is stated in a March 1992 publication of the Canadian Council of Forest Ministers entitled *Sustainable Forests: A Canadian Commitment*. The Strategy's "goal is to maintain and enhance the long-term health of our forest ecosystems, for the benefits of all livings things, both nationally and globally, while providing environmental, economic, social and cultural opportunities for the benefit of present and future generations." The Strategy outlines nine strategic directions, covering 96 commitments, to achieve the goal:

- Conserve the natural diversity of our forests, maintain and enhance their productive capacity and provide for their continued renewal;
- Improve our ability to plan and practice sustainable forest management;
- Increase public participation in the allocation and management of forest lands and provide an increased level of public information and awareness;
- Diversify and encourage economic opportunities for the forest sector in domestic and international markets;
- Increase and focus research and technology efforts to benefit our environment and our economy;
- Ensure that we have a highly skilled and adaptable workforce;
- Increase participation by and benefits for Aboriginal people in the management and use of forests;
- Assist private forest owners in continuing to improve their individual and collective abilities to manage and exercise stewardship of their lands; and,
- Reinforce Canada's responsibilities as trustees of 10 per cent of the world's forests.

FINDINGS

From a review of the NFS and our review of the Model Forest activities, we find that the operations of the Model Forests are consistent with the NFS. In particular, the overall goal of the Model Forest Program (the shift to sustainable forest management) and its three specific objectives are consistent with the NFS. However, the latter are sufficiently general that it would be difficult not to be consistent. The response to a previous question also shows that the goals and objectives of the individual Model Forests are consistent with the goals and objectives of the Model Forest Program. Nevertheless, the site visit interviews revealed some interesting insights into the role played by the NFS in achieving that consistency.

- The NFS has not played a strong, overt role in the operations of the Model Forests. Outside of the General Managers, the CFS Regional Coordinators and a few Board members, there was very limited familiarity with the NFS. Amongst those who had knowledge of the NFS, the general view was that it contains such broad objectives and commitments that it would be difficult for the Model Forest Program to be inconsistent with the NFS.

- The NFS did not play a large role in the planning of Model Forest activities because these are driven mainly by the local agenda. That is, in each Model Forest, the Board, assisted by its associated committees, selects the issues, problems, projects and activities that will be part of the adopted work program. In this sense, the Model Forests operate as bottom up organizations within the Model Forest Program, rather than top down, where priorities are set according to the elements of the NFS.

- However, the NFS may have played an indirect role in shaping the various Model Forest objectives and work plans. By this we mean that the NFS has served as a subtle, and perhaps not obvious, guide to the Board's thinking, through the input made to Board discussions by the CFS Regional Coordinators and perhaps the Managers.[21] The policy knowledge of the Coordinators was noted as being particularly useful in some regions, although the continuing reorganization within CFS during the past two to three years may have undercut their effectiveness. In our view, this role would have been more important during the first one to two years of Model Forest operation when the contribution agreements were being negotiated, and during planning activities when objectives were being reviewed and priorities developed. On an ongoing basis, the review of the annual work plans by the Regional Coordinators provides another opportunity for this type of influence.

21 Note, however, an alternative view would question the causal role of the NFS. This view argues that the NFS captures the spirit of the times well and that the Model Forest Program does too, but not because of the NFS.

8. How are the participants dealing with the conflicts that may arise as the concept of sustainable development is applied to traditional management strategies? (4)

Conclusion

- Model Forests spent up to two years developing the necessary level of trust and respect required to make joint decisions in the face of conflict.
- Some brought in neutral external facilitators to help resolve disputes.
- Decision-making by consensus, although not universally used, appears to be the most widely used conflict resolution mechanism.
- Each Model Forest has developed its own approach to conflict resolution.

INTRODUCTION

All Model Forests involve partnerships of several proponents, and the partnerships have in some cases grown since the original proposals were drafted. Several Model Forests had to contend with historical problems and conflicts between founding partners. These problems had little to do with the Model Forest itself, but special negotiations were needed to resolve differences before any progress could be made, and most were resolved. In the case of the Manitoba Model Forest, however, agreement could not be reached with First Nations, and the partners decided to go ahead without their participation. In the end, a spectrum of partnership arrangements was put in place, ranging from small, tight decision structures with clear and simple objectives to full-blown multi-stakeholder partnerships where decisions are agreed to in an open consensus process. To answer this question, we explored the issue in detail during interviews conducted as part of the site visits. We also received input via the Stakeholder Consultation. Our findings follow.

FINDINGS

The Western Newfoundland Model Forest Pine Marten Conflict Resolution Group brings together all the various stakeholders to work together in a positive fashion to resolve a major forest conflict, survival of the Pine Marten versus timber harvesting.

An important part of conflict resolution has been the candid discussion among partners who had little occasion to talk to one another or who had a history of strained adversarial working relationships before the Model Forest came into being. As already noted, some Model Forests spent up to two years developing the necessary level of trust and respect required to make joint decisions. Some brought in neutral external facilitators to help resolve disputes, and eventually all achieved a sufficient degree of respect and trust for other partners that they were able to make progress together. The 'unholy alliance' referred to previously in Question 5 would never have worked together cooperatively were it not for the Model Forest.

There were, and still are, many conflicts in need of resolution, where different parties hold radically different points of view on an issue such as wildlife conservation,

spraying, land use, or the script of a video-tape. All seem to have been tackled by lengthy and frank discussion, and settled within the room - even if final agreement on a solution could not be reached immediately. Most participants cited lack of shared values and a lack of understanding of the other's concerns as the major sources of conflict, though others noted that competition for project funding also caused serious conflicts in the early years.

A small number of original partners withdrew from the Model Forests, either over differences in values, or over funding disagreements, but eventually a strong sense of community and buy-in to most of the partnerships was achieved.[22] One observer noted that much conflict resolution occurs through informal discussion and thus never reaches the floor at a Committee or Board meeting.

Consensus was the predominant method for dealing with conflict, but processes varied from forest to forest.

Decision-making by consensus,[23] although not universally used, appears to be the most widely used conflict resolution mechanism. Boards are willing to meet and resolve issues fully before moving on to new issues. Some Boards use a voting system where they seek to establish consensus and confirm it by majority vote. Most Model Forests have not consciously designed a specific conflict resolution mechanism, although some have had workshops on conflict resolution. It appeared that Model Forests dealing with many value sets tended to adopt full consensus approaches, while those dealing with more narrowly defined problems made use of the more traditional approaches of management planning, decision-making and delegation. A hybrid model was to use consensus in designing a planning framework and criteria and then use business hierarchical structures for implementation. Some Model Forests had developed a de facto two-tier structure, where management decisions were taken by an "executive" group, and the majority of partners played an advisory or project implementation role, leading to a feeling among some in the second tier of being second-class.

Another important mechanism used was choosing to avoid controversial issues, but spending more time on ground rules such as project criteria and selection. This had its dangers, especially in potential conflict of interest, when project proponents were also part of the consensus group allocating funds. Some saw this as consensus in its weak form, where participants agree on easier issues, while sweeping harder issues under the rug. To them, conflict over tangible trade-offs involved in developing a forest management plan were still to come, and held no guarantee of success. To others, the slow approach was a way of letting people develop a level of trust that would allow the tougher issues to be dealt with later. They expressed the view that conflict over early issues had certainly delayed progress, but would be compensated by speeding up the overall attainment of goals.

Each Model Forest had surprisingly developed its own approach to conflict resolution, and there was no evidence of transfer from one Model Forest to another. We wonder whether the Model Forest Network could have played a stronger role in this regard.

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22 Except in the previously noted case where the industrial partners are still present in name, but have withdrawn active support. This may create an illusion of involvement where none exists.

23 Consensus is generally taken to mean something which all parties can 'live with', even though it may not be the ideal from any one point of view. The concept rests on the idea of building agreement through understanding and harmonization of each stakeholder's underlying interests, rather than through the adversary style used in most negotiations, where parties find some compromise between negotiating positions.

There was some evidence, however, that the conflict resolution/consensus approaches developed in the Model Forests were being adopted by a handful of others in the government, non-government, and business communities. Most Model Forest Partners thought they had developed approaches which had empowered them, which were worth explaining to others, and which could be used in other forest situations. Some, however, noted that they would not have come together without a funding source, and others might need a similar encouragement!

Stakeholder Consultation

Conflicts

Our Stakeholder Consultation also sought input on the progress being made by Model Forests in coping with conflicts associated with the application of the concept of sustainable development to forest management. The findings are summarized in Table 4. Our first two questions probed the relative success of the Model Forests in establishing a foundation on which the conflict resolution process could build. There was *strong agreement* that the Model Forests are leading to an increased appreciation of values other people assign to the forest. There was also *strong agreement* that the Model Forest served as a good means to bring people together with conflicting values. The respondents did generally *agree* that the Model Forest has created good methods to resolve conflicts, although agreement was not as strong as the response to the first two questions. Similarly, stakeholders also *agreed* that the Model Forests have been better at conflict resolution than other non-Model Forest areas that they were familiar with.

Table 4
Stakeholder Consultation on Applying the Concept of Sustainable Development

2. Applying the concept of Sustainable Development to forest management may lead to conflicts from applying non-traditional management strategies. Do you agree or disagree with the following statements: 1 = Strongly Disagree 5 = Strongly Agree	Average Response
The Model Forest has increased my appreciation of the values other people assign to the forest.	4.0
The Model Forest has served as good means of bringing together people with conflicting values.	4.1
The Model Forest has created good methods to resolve conflicts between people holding different forest values.	3.4
The Model Forest has been better at conflict resolution than other non-Model Forest areas that I know.	3.6

Note: See the Appendix for a discussion of the interpretation of the stakeholder consultation results and for the distribution of the responses across the response categories.

9. How has Canada's competitiveness in forest products been affected as a result of the program? (11)

Conclusion

- It is too early in the Program's life to tell whether it has affected Canada's competitiveness in forest products.

INTRODUCTION

Our analysis for this issue is based on our site visit interviews, as well as input from the Stakeholder Consultation. We should note that much of the analysis that follows in Question 10 also has relevance to this question. Our findings follow.

FINDINGS

The proportion of the productive forest land base of Canada involved in the Model Forest Program is so small that it is unlikely that the program will affect competitiveness directly. The indirect effects on the forest product industry's competitive position, either through improved practices initiated in Model Forests or through improved market access due to public acceptance of Model Forest practices, cannot yet be discerned. Evaluation of incremental effects associated with the Model Forest Program is particularly difficult since there is considerable and broader pressure from changing provincial policy contexts and international environmental certification movements that also affect Canada's competitiveness. Many stakeholders interviewed felt it was much too early to tell whether there would be any change in competitiveness but they predicted the effects, if any, would be positive. Many Model Forests had been visited by large numbers of international guests, often from countries that are important markets for Canadian products (e.g., in Central Europe). Most Model Forests we visited were only now starting to modify operational forest management practices and evaluating their results and, as a result, stakeholders felt that the next few years would yield concrete improvements in practices and public acceptance. We saw limited evidence that Model Forest stakeholders are using their participation as an aid to sales, although one example is Abitibi Price of the LAMF, which is using a product label stating: "Paper from One of Canada's Model Forests, LAMF, Partners committed to Sustainable Development". They noted it was important as their customers in the United States were much more "green conscious". In fact, it was noted that the Model Forest label was viewed more positively by their customers than "green certification", because the Model Forest Program was seen as being leading edge, whereas the green certification program was seen as establishing *minimum* performance standards. There is, however, a concern here that perception is ahead of reality, and a loss in credibility could result.

As part of the Stakeholder Consultation, respondents (see Table 5) were asked for their opinion on the role of the Model Forest Program in affecting costs of producing traditional forest products. There was general *disagreement* that the program was contributing to the lowering of costs and *weak disagreement* that the program is resulting in higher costs. Respondents did express *weak agreement* that the program is assisting Canadian industry to both maintain its international market share and gain access to new international markets. It is important to note that for the questions on costs and markets, almost 40% of respondents did not feel they could provide an informed answer. A notable finding of the Stakeholder Consultation was the *strong agreement*

recorded in response to the statement, *I believe the Model Forest Program is demonstrating to the world community that Canada is committed to managing its forest resources in an environmentally sound manner for the future benefit of all.*

We note, however, that this belief does not necessarily mean that there has been an impact on Canada's competitiveness in forest products.

Table 5
Stakeholder Consultation on Model Forest Program Impact on Canada's Competitiveness in Forest Products

5. Canada's competitiveness in traditional forest products (such as pulp and paper, and lumber) may have been affected as a result of the program. Do you agree or disagree with the following statements: **1 = Strongly Disagree 5 = Strongly Agree**	**Average Response**
The Model Forest Program is contributing to lowering the costs of producing traditional forest products.	2.4
The Model Forest Program is resulting in higher costs of producing traditional forest products.	2.7
The Model Forest Program can be credited with assisting Canadian industry to maintain its international market share	3.4
The Model Forest Program can be credited with assisting Canadian industry to gain access to new international markets	3.3
I believe the Model Forest Program is demonstrating to the world community that Canada is committed to managing its forest resources in an environmentally sound manner for the future benefit of all.	4.0

Note: See the Appendix for a discussion of the interpretation of the stakeholder consultation results and for the distribution of the responses across the response categories.

10. Has the international acceptance of Canada's forest products improved such that we are less subject to protests stemming from environmental concerns? How much of this can be attributed to the Model Forest Program? (12)

Conclusion

- There is a strong dichotomy between industry and environmental group responses to this question. The industry thought that the Model Forest Program, in combination with other initiatives, had the potential to reduce protests from environmental concerns. The environmentalists, on the other hand, indicated that significant changes on the ground were needed to affect the risk of protests and that the Model Forest Program was unlikely to have much effect on it.

- Some improvement to the international acceptance of Canada's forests can be attributed to the Model Forest Program. However, there is broad agreement that it is probably too early to identify the specific incremental effects of the program.

INTRODUCTION

To develop our analysis for this issue we have drawn on both our site visit interviews as well as a much broader range of contacts. Interviews were conducted, mainly by telephone, with representatives of:

- Environmental groups;
- Trade officials at Canadian embassies and consulates;
- Federal government officials;
- Industry trade associations;
- Forest policy researchers.

We also conducted a Literature Review of related topics. Our findings follow.

FINDINGS

A widely held view by Model Forest stakeholders was that it is probably too soon to tell whether the international acceptance of Canada's forest products has improved to such an extent that we are less subject to environmental protests. Many respondents pointed out that there has been strong international interest in what Canada is doing under the Model Forest Program, and that more time is required for the results to become known by more Canadians, as well as others internationally. Some of those interviewed by telephone commented that it was too early to see specific impacts from particular Model Forests, while others made general observations on this issue without any qualifications.

Responses of representatives of industry and environment groups were divided over the first part of this question. In general, environmental groups saw either little or no improvement in the international acceptance of these products, whereas people from government and industry saw a marked improvement.

Some trends in environmental protests which must be considered in answering this question are listed below:

- Environmental groups have shifted their focus from tropical to temperate rain forests (especially the Rainforest Action Network).
- The target of forest campaigns has shifted from European buyers (mostly pulp and paper) to United States buyers (newsprint, directories and magazines) so that there are now two fronts of attack.
- Some environmental groups have become discredited or had their credibility questioned recently. (For example, the Red Star oil rig incident in which Greenpeace exaggerated its impacts.)
- Some environmental groups are scaling back on the pressures they were imposing on the forest industry partially because of other issues, and to a small degree because of real improvements in Canada's and especially British Columbia's forest industry.
- There is a trend for environmental groups to go after companies buying forest products directly and encourage them to break contracts rather than to plan full boycotts.
- A strong market has lessened the effects of protests and boycotts by environmental groups.
- Some more moderate environmental groups are now actively participating in the development of new forest policy and legislation.

Poor forestry practices and an accelerated rate of cut were cited most often by representatives of environmental groups as the reason for no improvement. Criticism, for example, focused on new pulp developments and expansions, multinational megaprojects, loss of habitat, pollution problems, and lack of environmental assessments. For some, the real issue is the use of clear cutting as a harvest method. The visual impact is still very great and some of the new ecological knowledge about clear cutting in a longer term context has yet to become well known and understood. That is, it is still not known whether clear cutting creates a loss in biodiversity in the long run, over the life cycle of a forest. New harvesting systems, such as "corridor selection harvesting" and eco-system based management are being used, but only on a small scale. According to the views of major environmental groups in Canada and in Europe, the British Columbia forestry situation has not improved on the ground. Even some of the respondents who thought that the international acceptance of Canada's forest products had improved, conceded that there were still some bad forestry practices.

Representatives of forest industry trade associations such as the Canadian Pulp and Paper Association (CPPA) and British Columbia Council of Forest Industries (COFI), and commercial trade officers of foreign embassies believed that Canada was becoming less subject to protests and cited the Model Forest Program, as well as other initiatives described below, as the reasons for this improvement. They noted that the credibility of Canada's forest products industry had increased and progress had been made in getting Canada's point of view known in Europe. Some of the improvement was attributed to real improvements in Canadian industrial forest practices. Examples are the new Forest Practices Code in British Columbia, and the Scientific Panel's recommendations for Clayoquot Sound. As well, in Ontario, the government introduced the new Crown Forest

Sustainability Act and a host of new policies, following the exhaustive environmental assessment of timber management. Because of these changes, as well as aggressive national and international campaigns by organizations such as the Forest Alliance of British Columbia, the public's perception is that practices in the forest industry have improved.

Some respondents from University of British Columbia, Forest Economics and Policy Analysis Research Unit of the University of British Columbia (FEPA), and CFS, who have studied the international reputation of Canada's forest products, suggested that the international acceptance of these products had improved in particular in Europe, but not in the United States. This, in part, reflects the shift in targets of forestry campaigns to United States producers of telephone directories, newspapers and magazines.

While forestry boycotts and protests and the Clayoquot Sound issue peaked in the early 1990s, some respondents predicted that they would return since many of the underlying problems in the industry were never resolved. They saw government and industry's efforts to stem the forestry campaigns of environmental groups and to assure buyers of the credibility of Canada's products as mere public relations and window dressing. According to this view, the calmer level of debate is only temporary.

Economic Impacts of Protests and Boycotts

Studies and comments on the impacts of protests and boycotts on markets for forest products were all anecdotal. Representatives from industry and environmental groups tended to have divergent views on the reasons behind cancelled contracts and losses in sales and markets. This can be illustrated by the Scott Paper International (U.K.) and Kimberly Clark cancellations of tissue paper contracts from MacMillan Bloedel in March 1994. Greenpeace U.K., which credited its campaign for this contract loss, argued that Scott Paper lost millions of dollars and stopped doing business with MacMillan Bloedel because it was logging in Clayoquot Sound. Industry representatives, on the other hand, argued that a small order worth only $5 million was not renewed for a short period of time, after which Scott Paper continued to buy paper from MacMillan Bloedel. According to the latter view, this was a business decision that coincided with a large change in pulp and paper prices.

There are some companies in Europe that are buying only green forest products. For example, a number of large companies in the United Kingdom have made commitments that they will not buy wood or wood products from Clayoquot Sound, because of their logging practices. This World Wildlife Fund 1995 Group, which is committed to buying only wood and wood products which comply with Forest Stewardship Council Principles and Criteria, now has some 25% of the United Kingdom's timber sales. Similarly, there is a group of German publishers that will not use paper made from wood from firms using clearcutting, following pressure from Greenpeace Germany.

A professor from FEPA, who recently compared the short term and long term consequences of boycotts, suggested that there may be indirect rather than direct effects from threats of boycotts. He argued that threats of boycotts in British Columbia reinforced government efforts to introduce measures such as the new Forest Practices Code and the Scientific Panel appointed to deal with Clayoquot Sound.

Representatives of government and forest industry trade associations agree that the environmental debate has had no discernible impact on Canada's share of the market in Europe. Protests and boycotts in Europe might have affected corporate thinking in the greener markets like the United Kingdom and Germany, but were thought to have had

only marginal effects on sales. Any decreases in Canadian exports to Europe are more likely a function of the market (supply, demand, prices, increases in exports to the Far East, etc.), and it is not possible to see a direct impact from protests and boycotts in trade statistics. In comparison, the loss of trade to Europe because of the pinewood nematode problem which requires softwood to be heat treated or kiln dried is much larger and can be traced in trade statistics.

Canada's forest products industry with its strong markets is not vulnerable now. However, insignificant impacts from protests may become a much larger problem when the market weakens. Alternative wood products such as chlorine-free pulp and recycled products evolving in Europe may soon provide more competition for Canada's exports, especially in greener markets.

Role of Model Forest Program

Forestry trade experts from government (CFS and Department of Foreign Affairs and International Trade (DFAIT)) and trade associations believed that Canada's forest products industry is becoming less subject to protests because of the Model Forest Program. They argue that the Model Forest Program helps to respond to public concerns about forest management and harvesting practices and shows a level of seriousness about addressing these concerns. Model Forests are viewed as good examples of applied sustainability, and many international visitors have been impressed by them. The exposure of the Model Forest Program to national and international groups is helping to inform opinion influencers more widely. The program is very well known to scientists and foresters in other countries. Its excellent reputation internationally has been beneficial to the image of Canada's forest industry. Europeans in particular strongly approve of the Model Forest Program, and suggest that the program should be publicized and made more visible.[24]

The Model Forest Program has enhanced Canada's credibility as a progressive manager of forests. Government representatives and trade officers of the Canadian Embassy in Europe believed the Model Forest Program was a major step forward in shifting Canada's approach to sustainable forestry management. It was praised for presenting a new way to do sustainable forestry management on a working level, allowing forests to be managed for multiple values, and allowing for work with partnerships at an early stage. A representative of the DFAIT commented that the Model Forest Program was a major factor in creating a new image of Canada as a leader in sustainable forestry management. She thought it was a good program because of the large number of organizations involved in it (i.e., government, industry, academics).

Its real impact, according to one representative of the CFS (Policy, Planning and International Affairs), is how it changed the general thinking of how sustainable forestry management can take place. Thus, in a general way rather than directly, the Model Forest Program could make Canada's forestry practices less subject to protests and boycotts by improving Canada's image as a producer and supplier of forest products.

Whether the Model Forest Program will result in Canada's forest industry being less subject to protests and boycotts, according to some respondents, will depend on how it

24 W. T. Stanbury, I.B. Vertinsky and B. Wilson, The Challenge to Canadian Forest Products in Europe: Managing a Complex Environmental Issue (University of British Columbia: FEPA Working Paper 211, 1994)

is used. If the lessons and knowledge learned from the program are applied more broadly to provincial forests and industrial licenses, it could be a very effective tool.

Some representatives of environmental groups argue that the Model Forest Program is not a model of sustainable forestry. Instead, they view it as a "make work" public relations project that focuses on mapping and inventorying rather than on experimental logging. In their view, the program relies too much on industrial links and in some cases, has simply overlaid projects over existing forestry sites. They contend that no significant changes have come out of the program, and it does not deal with the overall problems of the forest industry. They concede that a few visiting groups' minds may have changed from touring Model Forests, but with a more educated and powerful environmental movement, the Model Forest Program had little influence on their forestry campaigns. In their opinion, a real change of forestry practices on a broad scale would have to occur before Canada's forest products industry would be less subject to environmental protests.

The international Model Forest Program has improved the image of Canada's forest products industry in Mexico, Russia and Malaysia, according to one trade officer of the Canadian Embassy. A representative of the CFS (Policy, Planning and International Affairs) noted that since the program had expanded internationally, there has been a lot of international support for it, and 25 other countries were interested in participating in it. Some Model Forest stakeholders believed that the international Model Forests were driven by politics (e.g., Mexico is in NAFTA and Russia is a competitor) and they were not linked in any practical way to the domestic side of the program. Others, mostly representatives of environmental groups, were critical of exporting Canada's forestry techniques to other countries because of problems in our industry, and because they consider some of these highly mechanized techniques, aggressive and industrial-scale rather than ecosystem-based.[25]

Other Initiatives

Other initiatives which government and environmental group representatives credit with improving international acceptance of Canada's forest products include the following:[26]

- Forest Practices Code in British Columbia;
- Scientific Panel Recommendations on Clayoquot Sound;
- International lobbying campaigns of industry (British Columbia Forestry Alliance, CPPA, and MacMillan Bloedel) and government (British Columbia government);
- Certification by CSA;

25 We note that there are several smaller mechanical harvesters now designed to have low environmental impact. Many are used in private woodlot forestry. Of course, switching over to low impact machinery will only occur over a period of time as older equipment is replaced as part of the industrial investment cycle.

26 We note that these respondents did not cite the International Forestry Partnerships Program run by the CFS. This program aims to head off protests mainly by bringing international visitors to Canada to allow them to learn first hand about Canadian forest industry practices. The program does not direct visitors to the Model Forests because of the view that visitors want to see companies actually managing forests rather than organizations (without a land management mandate) studying the implementation of sustainable development.

- Canadian-Malaysian initiative;
- Montreal Process for Sustainable Development;
- Environmental Assessment of Timber Practices in Ontario.

Some representatives of forest industry trade associations, government, and Canadian embassies believed that the Model Forest Program, in conjunction with some of these initiatives, would make Canada less subject to protests and boycotts because of the industry's enhanced credibility and image. One respondent from the FEPA Unit of University of British Columbia commented that the Model Forest Program should not be perceived as a "magic bullet" that will save the industry, and suggested that it should be used as part of a portfolio of strategies to deal with the management of Canada's forests.

Thus, the evaluation team believes some of the improvement made in the international acceptance of Canada's forest products can be attributed to the Model Forest Program either directly or indirectly.

11. How effectively is the Canadian Model Forest Program being managed? (14)

Conclusion

- A persuasive rather than an autocratic approach was used to influence the management and administration of Model Forests by CFS. We believe this was effective as it allowed each Model Forest the flexibility to develop its own unique character and approach toward implementing sustainable forestry, and yet gave the staff and partners a valuable communication link to other agencies and CFS researchers.
- The role of the Secretariat in facilitating the networking process between the Model Forests at the General Manager level was seen as valuable and responsive, but not broadly based.
- Relationships between the individual Model Forests and the Model Forest Coordinators varied considerably across the Network. On the positive side, this allowed the MFCs to be responsive to the needs of the individual Model Forests. However, in some cases, it created unevenness in the level of support provided to individual Model Forests.

INTRODUCTION

Following the acceptance of the Model Forests proposal, each site executed a formal contribution agreement with the CFS. These agreements were negotiated and administered through the CFS regional establishments.

The Model Forest Secretariat (MFS) was established by CFS headquarters in Ottawa to play a role in the program. The Secretariat supports the Model Forest Network Committee and is responsible at the national level for overall program administration, communications and various operational activities. The Network Committee is composed of the general managers from each Model Forest and a number of other federal and provincial representatives.

The MFS has been supported by Regional Model Forest Coordinators (MFC) who deal with day to day issues that arise at the individual Model Forests. In most cases, these MFCs serve as ex-officio (non-voting) members of the Board of Directors for the Model Forest and act as communication links to CFS. They provide advice to the Boards on CFS policies, procedures and reporting requirements. The MFCs also review and approve workplans, as well as manage budgets and cash flow on behalf of CFS. They provide the opportunity for communication among Model Forests, and between Model Forests and the outside community. To coordinate their approach to working with the Model Forests, the MFCs established their own committee to provide a forum for dissemination of new information relevant to Model Forests and for discussion among themselves.

Once a Model Forest site was established, it was responsible for the management of its own activities. The responsibility for decision-making rested with a Board of Directors. Day to day management of the individual Model Forests was the responsibility of

employed General Managers. The role of the federal government, through the MFCs, was largely administrative and supportive.

FINDINGS

In general, the CFS adopted a virtual hands-off or passive approach to the management of the Model Forest Program. This approach is consistent with the requirements of a contribution agreement. The individual Model Forests were effectively allowed to develop their own strategic directions and policies and make their own decisions. The CFS offered suggestions and guidance, established various administrative protocols, and reviewed the work plans for consistency with the Model Forest Program objectives and the contribution agreements. Generally, their real influence was at the Model Forest board level where they provided information and guidance drawing on CFS experience. A persuasive rather than an autocratic approach was used to influence the management and administration of a Model Forest.

Beyond the General Managers or Board of Directors level, understanding of the CFS management role (aside from being the provider of resources) was limited. Nevertheless, most people associated with the Model Forests appreciated this management approach. It allowed each Model Forest the flexibility to develop its own unique character and approach toward implementing sustainable forestry, and yet gave the staff and partners a valuable communication link to other agencies and CFS researchers.

Secretariat

Our site visits revealed that knowledge of the Secretariat's role, activities and outputs was limited to the General Managers and selected others. This can be explained by the fact that much of the interface between the MFS and the Model Forests has largely involved only the General Manager to date.

The role of the Secretariat in facilitating the networking process between the Model Forests at the General Manager level was seen as valuable and responsive. At the same time, virtually all agreed that the network activity has not been broadly based across the various types of partners in the Model Forests. In part, this has been a result of the largely inward looking focus adopted by the Model Forests in the early phases of their work. They have been mostly concerned about the functioning of their own partnership. As yet, priority had not been assigned to interaction with other Model Forests or for that matter with other industry interest groups. Recent initiatives by the Secretariat were cited as examples of potentially useful outputs. These include the efforts made to establish World Wide Web sites, the compendium of projects, and the attempt to build a unified communication theme.

Several persons raised the concern that the potential benefits associated with the MFS were not realized because its resources were diverted by the requirements of the International Model Forest Program. Associated with this comment was the observation that by including the International Model Forests at Network meetings, the size of the meeting and agenda has grown to the point where the needs of the Canadian Model Forests are being lost in the crowd.

Others suggested the MFS could have played a more significant role had they made more regular visits to the individual Model Forests. Visits that were made tended to be for specific reasons such as attendance at network meetings or to escort international visitors on a tour of the Model Forest.

Regional Coordinators

"The CFS (referring to the Model Forest Program) - I never even thought of them as managers." This comment really reflects the result of the largely hands-off approach by the CFS.

Relationships between the individual Model Forests and the Model Forest Coordinators varied considerably across the Network. This was a product of the management approach adopted by the CFS. This allowed the MFCs to be responsive to the needs of the individual Model Forests.

All MFCs were responsible for workplan approval and budget and cash flow aspects. Our site visit interviews offered very little criticism of the process followed or of the CFS requirements. CFS influence over actual workplans was generally constructive and more subtle than overt. Most MFCs had some involvement or participation in the project selection process. With a few exceptions, the Model Forest Workplans usually passed through the CFS approval process with relatively minor alteration.

The level of interaction between MFCs and individual Model Forests ranged from minimal, to one case where the MFC actually served on all of the Model Forest sub-committees, and another case where the MFC served as the President of the Model Forest. Much of the interaction was dependent on the level of human capital resources that existed in an individual Model Forest partnership, as well as the geographic proximity of the Model Forest to the MFC. For instance, where partnerships had limited access to scientific resources, the MFCs were able to facilitate the involvement of CFS researchers and other professional staff. By and large, this research support was appreciated. Some concern was expressed based on the perception that the CFS was drawing resources from the Model Forest to fund basic CFS (i.e., A-base) activities.

Some Model Forest observers suggested that CFS had stayed too far in the background. An example of where CFS could have played a more productive role was at the beginning to ensure research efforts followed a more strategic process. This is based on the observation that the Model Forests did not have the capacity to spend the allocated funds effectively in the early years of their operation.

We found that MFCs are in a position to facilitate the transfer of outputs and findings from the Model Forests. However, technology transfer generally is not happening on a large scale at this time in the evolution of the Model Forests. Once results are available and accepted by partners and scientists, the MFCs will be able to play a major role in the facilitation of transfer.

Stakeholder Consultation

The Stakeholder Consultation sought opinions about the management of the Model Forest Program by CFS (see Table 6). Three statements were directed at the Model Forest Secretariat management functions including making things work smoothly, making the Network work effectively and providing effective direction/leadership. The most notable aspect of response to these questions was that about 45% of respondents reported they could not provide an informed answer. Of those who did respond, there was general *agreement* to each of the three questions. Two statements were also more generally directed at the Canadian Forest Service. The first concerned the provision of effective leadership by being actively involved in the program. On average, respondents expressed *agreement* to this statement. The second dealt with the provision of effective leadership to the Model Forest Program by helping to identify potential problem areas.

Again, respondents expressed *agreement*. For these two questions about CFS, 27% and 33% responded, Don't Know, respectively.

Table 6
Stakeholder Consultation on Management of the Model Forest Program

7. Do you agree or disagree with the following statements about the management of the Canadian Model Forest Program? (The Program is managed by the Canadian Forest Service through the Model Forest Secretariat.) 1 = Strongly Disagree 5 = Strongly Agree	Average Response
The Model Forest Secretariat is helping to make things work smoothly at our Model Forest.	3.6
The Model Forest Secretariat is helping to make the Model Forest Network work effectively.	3.7
The Model Forest Secretariat is providing effective direction and leadership to the Model Forest Network.	3.6
The Canadian Forest Service is providing effective leadership to the Model Forest Program by being actively involved in the program.	3.7
The Canadian Forest Service is providing effective leadership to the Model Forest Program by helping to identify potential problem areas.	3.5

Note: See the Appendix for a discussion of the interpretation of the stakeholder consultation results and for the distribution of the responses across the response categories.

12. Are there effective linkages between the research needs of the Model Forests and the work done by various research laboratories? (15)

Conclusion

- Initially, research programs tended to be unfocussed, reflecting the interests of researchers and not necessarily the needs of resource managers.
- All partnerships have since recognized the need for a more structured process to identify priorities and evaluate proposals. As a result, research focus is steadily improving.
- There is a realization of the value of relationships with various research laboratories. In particular, universities within reach of the Model Forest sites are being used for this purpose.
- Where early involvement of research agencies has occurred, initial research efforts appear to have been more focussed, as the interaction between researchers and forest practitioners has fostered a better understanding of the linkages between research and practice.

INTRODUCTION

Research in the context of the Model Forest Program is viewed in a very broad sense. It ranges from fundamental studies such as the monitoring of hydrological pathways in forest ecosystems, to operationally oriented work such as alternative harvest system trials. In terms of addressing the needs of the Model Forest Program, both extremes are seen as valid, providing that the result is a strengthening of the information base on which resource management decisions are based (i.e., the Decision Support System (DSS)). In developing research programs in the Model Forest Program, the initial step should involve a determination of and agreement on information requirements, the development of a scientific approach to acquiring the information, and a systematic and rigorous assessment of the technical merit of the proposal relative to the identified need.

In addressing this question, we explored three issues. The first issue dealt with the process by which each Model Forest identified research priorities. The second dealt with the actual relationships which have developed between the Model Forest and specific agencies such as universities, CFS laboratories and consulting firms. The final issue is the degree to which the Model Forest Network has been instrumental in facilitating cooperation between Model Forests where research needs overlap.

FINDINGS

Prioritizing Process

Initially, seven of the ten Model Forests did not have formal processes for identifying research needs and evaluating the technical merit of research proposals. As a result, most of the initial proposals were unsolicited submissions by research agencies, stimulated by the availability of a fresh pool of research funds. Initially therefore, research programs tended to be unfocussed, reflecting the interests of researchers and

not necessarily the needs of resource managers. While there was concern amongst Model Forest partners with this 'shotgun approach', the flow of funds from CFS placed significant pressure on the partnerships to initiate work very early in the process, before needs had been fully identified. There was at least a perception that successful performance would be measured in part by expenditure of funds.

A notable exception occurred where the McGregor Model Forest partnership delayed the solicitation and funding of projects until research priorities had been established. While this created a degree of frustration among partners who desired to see the work initiated early in the five year period, the result very clearly was a more focussed information gathering program. Guidance from the MFC facilitated this process, which otherwise would have been constrained by the requirement to expend funds on a more-or-less even-flow basis over the five year term of the agreement.

In cases where there was a strong initial industrial presence, research efforts were in many cases extensions of existing programs. The priorities in these instances, therefore, reflected the needs of the industrial partners. While these priorities are often equally as relevant in the context of the Model Forest sustainable development focus, there was concern expressed among other members of the partnership that the programs were overly industry-driven. Furthermore, there were instances where this industrial focus resulted in rejection of research proposals in areas which were traditionally outside the range of consideration in conventional timber management strategies, but which are now seen as important considerations when dealing with a broader range of resource values. Landscape level hydrological issues are a case in point. However, in the course of interviews, it was clear that the priority on these issues is increasing, as Model Forest partners develop a broader view of sustainable development issues.

Despite the original 'feeding frenzy' which resulted from the availability of a new source of funds for contract research, all partnerships have since recognized the need for a more structured process to identify priorities and evaluate proposals in the context of decision support requirements. Most Model Forest General Managers confirmed the presence of a technical review process, where proposals are subjected to some form of internal or peer review before acceptance, and at the time of project progress review. It is disconcerting to note however, that some of the partners in these same Model Forests were unfamiliar with this process. Therefore, while these review processes exist, they do not at this time appear to be applied in a consistent manner to all Model Forests or research efforts.

While a technical review of the research program status of each Model Forest was beyond the scope of this evaluation, we are concerned that some ongoing projects, initiated early in the process, might be perpetuated to the end of the Model Forest Program without due consideration to their value, in light of the more recently identified requirements. Therefore, there is a need to re-evaluate the research programs of each Model Forest, relative to current DSS requirements. Furthermore, Model Forest partnerships should reassess the prioritization processes which they have established, to ensure that there is a clear distinction between the identification of the information requirement, and the evaluation of the technical merit of specific proposals. Failure to make this distinction often results in undertaking work based solely on the need for the information promised in the proposal, rather than on the probability that the proposed methodology will actually provide the needed information. In summary, research response to needs in the early stages appears to have been generally weak and not well focussed in most forests, but it is steadily improving.

Agency Linkages

A number of Model Forests have made a concerted effort to establish ongoing relationships with researchers at local or regional research facilities. There is a realization of the value of such relationships, value that extends beyond specific project timelines, allowing repeat involvement by researchers. In particular, universities within reach of the Model Forest sites are being exploited for this purpose. Eight of the ten Model Forests include regional colleges and/or universities as partners in their organizational structures. Where early involvement of research agencies has occurred, initial research efforts appear to have been more focussed, as the interaction between researchers and forest practitioners has fostered a better understanding of the linkages between research and practice. With few exceptions, the researchers we interviewed recognized the importance of these linkages in increasing their knowledge of the operational context in which the results of their work would be placed.

Network Effectiveness

While there is evidence that informal linkages have developed between a few individuals or agencies involved in specific research efforts, the 'Model Forest Network' concept has not evolved to the point where it fosters communication and cooperation among researchers working in related disciplines. This lack of widespread communication raises the question of possible duplication of effort, particularly in research, across Model Forest sites. Based on the site visits, we do not see this as being a major problem at this point. However, the potential exists, and the Secretariat should intensify efforts to develop an effective network to minimize the risk of unnecessary duplication. There is also the possibility of a significant loss of opportunities for developing new research ideas. This gives further reason to promote the network as a tool for researchers.[27]

27 We note there is also a need to foster more inter-disciplinary research on the same sites (rather than different sites) within individual Model Forests.

13. Are the other activities and outputs of Partners in Sustainable Development (Enhanced Science and Technology Program (EST) and Information and Bio-Monitoring Program (IBM)), assisting in the implementation of the Model Forest Program? (5)

Conclusion

- **It appears that the anticipated linkages between these programs and the Model Forest Program did not develop.**
- **Overall, there is little evidence that the EST/IBM programs have provided significant benefits to the Model Forest Program.**

INTRODUCTION

Under the Green Plan, The Partners for Sustainable Development in Forestry Program was designed to accelerate the implementation of sustainable development in forestry. It was composed of three components: a network of Model Forests (Model Forest Program) complemented by an enhanced research program and an information program. The initiatives had an initial allocation of $100 million, over 5 years, as follows:

Model Forest Program (MFP) – $54 million
Enhanced Science and Technology Program (EST) – $33 million
Information and Bio-Monitoring Program (IBM) – $13 million

The purpose of the Partners Program was to demonstrate leadership in the forest sector, and to indicate a shift in Canada's forest management from one based on sustained timber yield to one focusing on forest ecosystem management (sustainable development). We understand the activities and outputs of the EST and IBM were to assist in the implementation of the Model Forest Program. As part of our site visits we explored the inter-relationships between these three sub-programs with Model Forest Staff, various researchers and CFS personnel.

FINDINGS

Most of the Model Forest stakeholders interviewed, with the exception of General Managers and the Model Forest Coordinators, were totally unaware of the existence of these other programs. It appears that the anticipated linkages between programs did not develop, largely due to the fact that all three programs started at the same time. Therefore, while the Model Forests were engaged in the complex task of establishing new partnerships, governance systems, and operating rules, the other programs had the relatively simple goal of trying to allocate funds. This unfortunate timing to a large extent disengaged the Model Forests from the other programs. There is also a perception[28] that these other programs were largely "captured" by CFS to compensate for declining A-base research and development resources within CFS.

The most notable exception to the above occurred in the Decision Support System group within the EST program. This group made a conscious effort early on to assist the Model

28 We note this is a perception and may not coincide with the facts.

Forest Program by evaluating the Decision Support System Requirements at each Model Forest site.

There is evidence that the Model Forests made some use of these program funds. The financial figures provided in the Federal Direct Contributions Report *(see Question 14)* showed just over $700,000 (total budget for these two programs was $46 million) from these programs listed as indirect federal contributions to the individual Model Forests. The reader should note that the $700,000 figure is not an estimate of the total spending under the EST/IBM programs. Instead, it refers only to spending of funds on projects approved by, and most likely initiated by, a Model Forest. So, it is an accounting of funds that actually passed through the Model Forests' financial accounting systems.

Overall, there is little evidence that the EST/IBM programs have provided significant benefits to the Model Forest Program. There is a need for research program managers within CFS to ensure more effective coordination, and linkages with the Model Forest Program if these programs continue. Also, there is a need for the Model Forest secretariat and/or regional CFS Model Forest Coordinators to foster a greater awareness of these programs across the Model Forest Network.

14. What is the proportion of funding that the program leveraged from the partners? Could it have been larger? (9)

Conclusion

- Direct CFS contributions are the major cash funding source.
- Most non-CFS contributions to the Model Forests came in the form of in-kind resources or via joint funding of specific projects.
- Had the same level of federal resources not been available, a reduced level of program activity would have resulted.
- Most partners showed reluctance to add additional resources based on the accomplishments to date. Thus, the potential for non-CFS financial resources for the program is uncertain.

INTRODUCTION

Although the original intention was for the Model Forest Program to be implemented through a cost shared partnership, the selection criteria used by the National Advisory Committee to award Model Forests did not include partnership cash contribution or potential for leveraged funding. In addition, in only one case did the Model Forest contribution agreement specify requirements for the level of cash or in-kind contributions to be made by others aside from the CFS. Some of the agreements did identify the potential for partner contributions as possible sources but did not impose specific requirements.

In preparation for this evaluation, NRCan attempted to compile a summary of financial data for each of the Model Forests that would in effect answer this question. Their findings were contained in a December 1995 report entitled *Model Forest Program, Federal Direct Contributions and Other Sources Contributions* (FDC report). The purpose of this report was to document other funding sources, including other federal sources, that provided moneys indirectly (through other programs or via partners who already benefit from federal funding programs) and cash or in-kind (labor, materials, services, research and development, etc.) contributions made by the partners of the Model Forest.

Much difficulty was encountered in the preparation of the FDC report. The information was not available in a consistent format using consistent definitions. Specific expectations for recording this type of information were never made clear to the Model Forests. As a result, attempts to conduct an ex-post analysis on a consistent basis were greatly hampered.

Table 7 summarizes the CFS contributions on a Model Forest basis. For all ten Model Forests, the FDC report shows other funding sources accounted for $3.6 million in 1992-1993, $11.6 million in 1993-1994 and $10.4 million in 1994-1995. In other words, other

funding actually exceeded the CFS funds during the three financial years. The author of the FDC report made the following observations:

- Direct federal contributions are the major cash funding source;
- Indirect federal contributions are difficult to evaluate;
- Further measures to assess contributions from all sources will have to be developed;
- At the moment no Model Forest could function without federal contributions, both direct and indirect.

Table 7
Summary of CFS Funding ($'000)

	1992-1993	1993-1994	1994-1995
Long Beach	0	0	400.0
McGregor	272.3	544.5	1,168.5
Foothills	818.9	670.0	1,012.0
Prince Albert	220.0	1,198.0	1,325.0
Manitoba	195.0	947.2	1,091.1
L. Abitibi	n/a	1,040.0	1,012.0
E. Ontario	250.0	1,165.0	1,252.0
L. St-Lawrence	100.0	733.7	1,111.8
Fundy	160.0	974.0	1,012.0
W. Nfld.	n/a	929.7	n/a
Total	2,016.2	8,202.6	9,384.9

- Totals may not add due to rounding.
- n/a indicates that no Annual Reports for that year was found in the files of CFS Model Forest Secretariat.
- Long Beach Model Forest published its first Annual Report in 1994-1995 (first year of activity).
- Data on other contributions for Eastern Ontario Model Forest was provided by the Model Forest (in: "Funding Contributions to the Eastern Ontario Model Forest", December 15, 1995).
- Data for Fundy Model Forest was provided by the Model Forest (Memorandum, November 22, 1995).
- For Western Newfoundland Model Forest there is no data for 1994-1995, as no Annual Report for that period was in file at CFS Secretariat when the Status Report was produced. No further documents were received.

Source: Model Forest Program - Federal Direct Contributions and Other Sources Contributions, December 13, 1995 (Draft).

FINDINGS

- Most non-CFS contributions to the Model Forests came in the form of in-kind resources or via joint funding of specific projects. There were very few examples of partners or other agencies providing cash for the Model Forest to allocate at its discretion. One exception was The Foundation de la Faune du Quebec which now provides some $400K annually to cover wildlife projects in the Bas St-Laurent Model Forest.

- Individual Model Forests adopted various policies for project funding. These ranged from an explicit requirement of funding support based on one third from the Model Forest, one third from the partner and one third in-kind (partner time counted as in-kind) to no fixed leverage requirements for joint funding. At the time of our site visits, all Model Forests included joint funding and in-kind contribution in their project selection criteria, although most do not require specific levels.

- Virtually all partners of the Model Forests made in-kind contributions, notably the time of people from their organizations doing Model Forest business. Very few recovered expenses related to participation. In fact, most partners and Directors pay their own travel expenses. There were some exceptions such as, where a key partner from a NGO with limited resources had travel expenses for meetings covered.

- Several of the Industrial partners made large in-kind contributions. Minimal cash was provided for general operations of the Model Forest or project funding. One industrial partner did contribute the services of a General Manager.

- Provincial contributions have been modest - mostly in-kind.

- Had the same level of federal resources not been available, most Model Forest observers felt a reduced level of activity would have resulted. Reduced federal resources would not have resulted in greater funding participation by other partners up to this point in time, especially during the first generation where proven results are only beginning to emerge.

- A few of the Model Forests noted that in the early stages of their programs, they found it necessary to financially support projects proposed by specific members of their partnership. Essentially these projects served as incentive to keep certain partners active in the Model Forest. In effect, this may have meant the Model Forest funds were leveraged by other agencies to meet their objectives.

Future (Could it be larger?)

During our site visits, responses to this question tended to draw on past experience to look forward. Our findings include:

- Nobody was willing to admit to being a potential untapped pool of leveraged funding.

- Industry was commonly cited as having the most potential to provide additional resources to the program in the future. Representatives of a few industrial partners seemed willing to consider greater financial participation in the future but no indication of scale was given.

- Future provincial funding is expected to get tighter, and thus, the provinces are not likely to be a source of future operational funding.
- Most NGOs have limited resources to contribute.
- Some allied industries (e.g., saw makers and equipment manufacturers) could become sponsors.
- Charitable Foundations may be potential sources of funding
- The Forest Resource Improvement Fund (FRIP) in Alberta and the Forest Renewal Fund in British Columbia (FRBC) could become more important sources of funding in the future. Both funds are being used now in the respective provinces. This holds also for the Environmental Trust Fund in New Brunswick and the Forestry Futures Trust in Ontario, as yet untapped sources.

Stakeholder Consultation

Our Stakeholder Consultation also provided input to this issue. The findings are summarized in Table 8. There was *agreement* that the Model Forest was successful in attracting funding from other non-federal partners. There was also *agreement* to the statement that partners could contribute more than they do now. This would seem to indicate that there is potential in the future for more non-federal government resources to be available to the program. However, this potential was tempered by the *disagreement* that if Model Forest Program funding were cut by 50%, partners of this Model Forest would increase their contribution to replace the lost resources. Respondents also on average expressed *weak disagreement* that the Model Forest has been so successful that they were confident the Partners will increase their level of financial support in the future, even if Model Forest Program support remains at its current level.

Table 8
Stakeholder Consultation on Model Forest Activity to Attract Funding

3. Model Forests were expected to attract funding (cash and in-kind) from their partners to add to the federal funding coming from the Model Forest Program. Do you agree or disagree with the following statements: 1 = Strongly Disagree 5 = Strongly Agree	Average Response
This Model Forest has been successful in attracting funding from its partners.	3.6
Partners of this Model Forest could contribute more than they now do.	3.6
If Model Forest Program funding were cut by 50%, partners of this Model Forest would increase their contribution to replace the lost resources.	2.2
The Model Forest has been so successful that I am confident the Partners will increase their level of financial support in the future, even if Model Forest Program support remains at its current level.	2.6

Note: See the Appendix for a discussion of the interpretation of the stakeholder consultation results and for the distribution of the responses across the response categories.

15. Has the program resulted in increased networking among all those interested in the sustainable management of Canadian forests? (17)

Conclusion

- Generally, our site visit interviews yielded a view that the partnerships were in most places broad enough to ensure a positive impact on the pursuit of sustainable management at the local level.
- The MFs have tended to remain isolated from the broader Canadian forestry community in Canada in terms of collaborating on activities designed to achieve sustainable forestry management.
- Networking at the international level has resulted mainly from the twinning activities with other International Model Forests.

INTRODUCTION

A major focus of the Model Forest Program has been to build partnerships locally, nationally and internationally. According to the Guidelines for Applicants, partnership is a fundamental principle of sustainable development. It is through the networking of partners that new approaches to forestry will be developed and operationalized, leading to the achievement of the overall goal of sustainable forestry. The program facilitated the building of partnerships at different levels in the following way:

- At the *local* level through the operation of the ten individual Model Forests;
- At the *national* level through the activities of the Model Forest Network;
- At the *international* level through the International Model Forest Program.

Our analysis includes partnership activity at the three levels described above. Our in-depth focus is on the local level. The issue of Networking at the National level was covered in our discussion of Question 6. Our prime information sources for this issue are interviews conducted as part of the site visits, as well as, responses to a set of questions related to networking on the Stakeholder Questionnaire Table 9 summarizes the questionnaire results.

Table 9
Stakeholder Consultation on Model Forest Networking

8. A possible result of the Model Forest Program is increased networking among all those interested in the sustainable management of Canadian forests. Do you agree or disagree with the following statements: 1 = Strongly Disagree 5 = Strongly Agree	Average Response
The Model Forest Program has brought me into contact with many other people in *my own local area* who are also interested in the sustainable management of Canadian forests.	4.0
The Model Forest Program has brought me into contact with many other people in *other parts of the province* who are also interested in sustainable management of Canadian forests.	3.6
The Model Forest Program has brought me into contact with many other people in *other provinces* who are also interested in sustainable management of Canadian forests.	3.0
The Model Forest Program has brought me into contact with many other people in *other countries* who are also interested in sustainable management of forests.	2.7
The Model Forest has brought me into contact with many more people interested in sustainable forest management than would have been the case without the Model Forest Program.	3.9
Our Model Forest has the broad mix of partners necessary to achieve the overall objective of shifting from sustainable timber yield to sustainable forestry management.	4.0

Note: See the Appendix for a discussion of the interpretation of the stakeholder consultation results and for the distribution of the responses across the response categories.

FINDINGS

Local Networking

Are the partnerships effective?

Our site visit interviews clearly demonstrated to us that networking among Model Forest partners and local project participants and staff has been effective. The presence of the Model Forest has meant a higher local profile for forestry-related activities, which in turn, has encouraged much local cooperation among interest groups and individuals who have become involved with the Model Forest.

Respondents to the Stakeholder Consultation verified our site visit findings. On average, *strong agreement* was reported in response to the statement: *Our Model Forest has the broad mix of partners necessary to achieve the overall objective of shifting from sustainable timber yield to sustainable forestry management.*

The Stakeholder Consultation also confirmed (with *strong agreement*) that the Model Forest Program had brought people into contact with many other people in *their own local area* who are also interested in the sustainable management of Canadian forests.

As well, the formation of these partnerships did constitute incremental partnering activity. On average general *agreement* was reported in response to the statement: *The*

Model Forest has brought me into contact with many more people interested in sustainable forest management than would have been the case without the Model Forest Program.

Several Model Forest project members reported long-term business/personal /professional relationships had been formed through their Model Forest association. Many noted that a major accomplishment of the Model Forest Program has been the involvement of non-traditional forest sector stakeholders in Model Forest activities. Through our site visits, we found numerous examples where researchers, environmental groups, community development organizations, and individuals have established sustained and positive contact with the forest industry and government management agencies, as a direct result of the local presence of a Model Forest. Many of these non-traditional players claimed to either have had no previous contact or to have been adversarial in their previous encounters. As we have already noted, the Model Forests have served a unique role in overcoming historic adversarial relationships and fostering new working relationships among partners with common interests in sustainable resource management. Many special interest groups have taken on a higher profile through the Model Forest Program, and obtained funding for projects.

Generally, partners were satisfied with the operations of the individual Model Forest as it relates to providing opportunity to network with other participants.

Are the partners satisfied with the workings of the Model Forests?

All Model Forests reported having frequent or regular committee and Board meetings, and occasional functions and workshops. Most respondents found these useful, and felt comfortable picking and choosing which to attend. Committees were seen as being valuable for networking, both inside and outside the Model Forest. Several partners reported having daily telephone contacts with others.

Do the Model Forests have a broad mix of partners and is there sufficient opportunity for all members to be heard?

"The Model Forest Program is merely an expensive political exercise undertaken to improve the image of the Canadian forest industry abroad. It is yet another multi-million dollar subsidy to industry to conduct inventories and do GIS mapping. The industrial partners carry all of the weight in decision-making. While other "partners" are at the table, all are not considered equal and industry is not about to give up its power or allow others to make the decisions. In those Model Forests with industrial partners, no real changes have occurred as a result of the Program. Industry always talks a good story and wants to participate as long as tax payers are footing the bill."
– Model Forest Stakeholder

Generally, our site visit interviews yielded a view that the partnerships were in most places broad enough to ensure a positive impact on the pursuit of sustainable management. Some exceptions have been noted earlier in the report, such as the ongoing difficulty in involving Aboriginal groups in the Manitoba Model Forest and the lack of active industrial involvement in Long Beach Model Forest. There was also a concern noted by other respondents about a hierarchy of partnerships in some Model Forests, where second-tier partners felt marginalized regarding information sharing and decision-making. Concerns were expressed in some Model Forests that while interest groups were well represented, the general public was not. Another concern expressed at several Model Forests dealt with the perception that sponsoring industrial partners had too much influence on the Board and in Model Forest management, by virtue of having, in some cases, multiple Board seats and by providing seconded Model Forest staff. Despite these specific concerns, generally, many respondents cited the creation of partnerships, and the fact that all stakeholders sit together around a single table to resolve issues, as the biggest successes of the Model Forest Program.

How likely is it that the partnerships will continue without federal involvement?

Many of the local partnerships are expected to continue, at least in some form, in the absence of another Model Forest Program. However, the central focus of these partnerships around a working forest might be lost. Federal funding over the next five years is seen as critical to sustaining volunteer interest and ultimately achieving the objectives set out for the Model Forest Program.

Has networking extended beyond the Model Forest partners?

In several cases, we saw evidence that networking activity extended beyond Model Forest partners to others in the same province interested in the sustainable management of forests. For example, one industrial partner cited a substantial increase in the number and type of business contacts since joining the Model Forest as evidence of increased networking, and a shift towards sustainable forest management. Some consultants reported increases in their business activity from non-Model Forest clients, as a result of their Model Forest association.

"I attended a workshop two years ago and I know several people who work with the Model Forest (and respect their abilities). However, I feel quite ignorant about what they've accomplished - e.g., new techniques, new info, etc. There are articles in the paper when international Model Forest people visit here, but that's about it. Maybe if one is not an RPF, one is not in the loop."
- Model Forest Stakeholder

On average, there was *agreement* reported to the Stakeholder Consultation statement: *The Model Forest Program has brought me into contact with many other people in other parts of the province who are also interested in sustainable management of Canadian forests.*

National Partnerships

Networking activity at the national level was discussed in detail under Question 6 above. Generally, we found that aside from Model Forest General Managers, networking between the Model Forests has been negligible. Our peer interviews also showed that the Model Forests have tended to remain isolated from the broader Canadian forestry community in terms of collaborating on activities designed to achieve sustainable forestry management.

Several Model Forest participants did note they felt they would greatly benefit by communicating with others having similar interests in other Model Forests (e.g., a network caucus or electronic discussion group of scientists or environmentalists).

The Stakeholder Consultation also verified our site visit and peer interview findings. On average there was a virtual neutral response to the statement: *The Model Forest Program has brought me into contact with many other people in other provinces who are also interested in sustainable management of Canadian forests.*

International Partnerships

Networking at the international level has resulted mainly from the twinning activities with other International Model Forests. This participation has expanded personal horizons, increased media attention, increased public interest and resulted in significant international contacts for Aboriginal peoples.

Response to the Stakeholder Consultation question on international contact yielded a mixed response depending on whether the stakeholder's Model Forest was twinned or not. On average, weak disagreement was recorded, but generally, there were offsetting positive and negative responses.

16. Unintended Impacts and Effects (13)

Conclusion

- There were few truly unintended impacts and effects. The Model Forest Program did however generate a good variety of interesting and generally positive unexpected effects.

INTRODUCTION

The implementation of a government program can cause impacts and effects that were not anticipated to occur. These unintended impacts and effects can be either positive or negative and should be documented to benefit the design of a future program. Our findings related to the Model Forest Program follow. Most of these were identified through our interviews conducted as part of the site visits.

FINDINGS

We did not find a lot of truly 'unintended' effects. We did however find a variety of effects that fall within the spirit of the Model Forest program objectives, but go beyond what were reasonable expectations for the first five years of a very ambitious undertaking.

- **International Model Forest Program**. This program was announced by Canada at the U.N. Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil in June, 1992. Although planners for the Canadian program had hopes for an international network, the speed and magnitude of developments on the international side were certainly unexpected.

- **Change in attitude** at woodsworker level (broader sensitivity). In one Model Forest, woodsworkers involved with wildlife management activities changed their level of discourse significantly. Issues related to wildlife management and environmental protection became part of their routine discussions. Previously, they were only concerned with the most efficient harvest practice.

- **Model Ocean Program**. The Chairperson of one of the Model Forests has been the driving force behind the establishment of a Model Ocean Project. The southern Gulf of St. Lawrence Model Ocean is a multi-year and multi-disciplinary project to develop and demonstrate management practices that will lead to broad based sustainable development of all resources. Ultimately it is envisioned that a network of Model Oceans will evolve. The Model Forest Program was the inspiration behind this concept. In addition, we should also note that links have been made to work being done to establish models in the mineral sector and for land use planning.

- **Transfer of participating model to other organizations.** A New Brunswick provincial government employee in the Department of the Environment used the Model Forest participatory model to set up a soil conservation program (New Brunswick Soil Conservation Initiative) in agricultural areas.

- **Transfer of consensus process to other organizations.** At one of the Model Forests (EOMF) all business is conducted on a consensus basis with no requirement for quorum. Some participants reported that they have been so impressed by the level of respect and trust that emerges from this system that they have transferred the process to other organizations they are involved in. We understand the Ontario Private Land Stewardship program is using consensus-building processes similar to the EOMF.

- **The Model Forest Program has provided research and development opportunities to a broader range of academic institutions.** Historically, most university-based forest research was undertaken by universities with forestry faculties. Through the Model Forest Program, universities such as UBC, Alberta, Saskatchewan, Manitoba, Winnipeg, Brandon, Regina, Calgary, Queens, Carleton and Dalhousie have played a substantial role in Model Forest Program research. Involving these universities in the program has broadened the exposure of undergraduate students to the concept and practice of sustainable forest management. This process will likely yield future benefits by improving public understanding of Canadian forestry, and attracting more capable young people into forestry-related careers. The significant involvement of graduate students in many of the Model Forests will develop a cadre of young Canadian scientists with exposure to some of the most progressive forest resource planning and practices, as well as familiarity with many of the contemporary challenge of sustainable forest management. In some cases, the proximity of the universities to Model Forests enhances the opportunity for further research activity in them.

- **Renewed local interest in cultural values.** In the case of Long Beach Model Forest, exposure to the Model Forest Program has stimulated a resurgence of interest among First Nations youth in their cultural background.

- **The Youth Sector at LBMF is unique among the Model Forests.** It represents a wide cross-section of ages, social groups and belief systems. They bring to the Model Forest process a concern for the future and contribute communication, social, technical and most importantly, computer skills. Members of this sector were instrumental in getting the LBMF on-line with the Internet, teaching Model Forest staff about the Internet and developing a home page on the World Wide Web. They see their important role as helping the partners of the LBMF to communicate with each other, and with outside groups and agencies.

- **Southern New Brunswick Marketing Board (SNB) chosen as Case Study for CSA Certification initiative.** SNB is a partner in the Fundy Model Forest that represents woodlot owners. They suggested that had it not been for their involvement in the Model Forest Program, they would not have pursued this initiative. Similarly, at least two companies have had CSA certification audits completed. Both suggested their apprehensiveness about this process was reduced by their involvement in the Model Forest Program.

- **The commitment of Jasper National Park to the Foothills Model Forest land base was unexpected.** Although an original partner, this park has only recently added its land base to the Foothills Model Forest. This was unexpected given the past history of the park's view of its role.

- **Scale of partnering and networking greater than expected.** The working relationship between business, academics and environmentalists dealing with sustainability developed more fully than expected. Related to this has been the greater than expected tolerance of some Board members to accept opposing or contrary views, and the degree of trust and respect that has developed among former adversaries.

- **The métayer (Forest Tenant Farms) program at BSL has generated much enthusiasm.** Eco-groups are pleasantly surprised to get a chance to see *métayage* on the ground. They feel this will accelerate the cause of forest farms which provide an alternative to centralized, extensive forest management in Quebec.

- **The Montreal Lake Cree Nation has experienced a sharp increase in forest related employment.** This is attributed directly to the participation of the First Nations, Weyerhauser and the Prince Albert National Park as partners in the Prince Albert Model Forest, and the improved communication that followed. Increased employment was an objective for the Montreal Lake Cree, so this result is perhaps more unexpected than unintended, but it is an important result and worth highlighting in our view.

- **Level of commitment by partners higher than might have been reasonably expected.** Many of the Model Forests have used various means to achieve consensus on how Model Forests operate. We understand this approach has required countless hours of attendance by partners at meetings, usually at their own expense, a good indication of deep and sustained commitment.

17. What is the impact on the Model Forest Program of changes to provincial policies and legislation in the past five years? (1)

Conclusion

- There is no evidence that the Model Forest Program has affected provincial legislation directly, although there are indications of indirect or subtle influences on provincial policies and procedures.
- In most provinces, there has been little significant change in the way provincial policies have affected the activities of the Model Forests since inception of the program. British Columbia is an exception where recent legislation and policy changes have been so sweeping as to overtake and significantly affect the activities of the Model Forests.

INTRODUCTION

There is a possible two-way relationship between provincial policies and the Model Forest Program. Provincial policies may have affected the Model Forest Program, and perhaps more importantly, the program may have affected provincial policies. Our analysis for this issue is based on the interviews conducted with provincial government officials and others as part of the site visits. These were supplemented with interviews conducted by our evaluation team with peers of the Model Forest Program. Our findings follow.

FINDINGS

We found no evidence that the Model Forest Program has affected provincial legislation directly, but in four instances, we did find indications of indirect or subtle influences of the Model Forest Program on provincial policies and procedures.

In Ontario and Quebec, the private land forest management policy is being partially shaped by the approach devised by the Model Forests in those provinces. In a third province (Alberta), the forest conservation policy, currently being formulated, reflects elements of the thinking and philosophy of the Model Forest operating in that province. This influence stems largely from the input of people who are involved in both the provincial policy formulation and the Model Forest Program.[29]

In a fourth case (Newfoundland), the province has expressed a willingness to adopt the Model Forest approach to forest management planning, and has actually employed the stakeholder group concept used in the Model Forest as a vehicle for soliciting public input to management planning for other Crown lands in the province. It is interesting to note, however, that the Western Newfoundland Model Forest partners are hesitant about actually taking on a decision-making role in the management of land in the Model Forest.

29 Note that we are not saying the Model Forest was the prime influence. It was only one of a variety of contributors including the ALPAC (Alberta Pacific Forest Industries) and the National Centre of Excellence in Sustainable Forestry at the University of Alberta.

In the reverse direction, each Model Forest is obviously affected by the legislation and regulations relating to forestry practices in the province. In most cases, there has been little significant change in the way those policies have affected the activities of the Model Forests since inception of the program. In British Columbia, however, recent legislation and policy changes have been so sweeping as to overtake and significantly affect the activities of the Model Forests. These changes, coupled with local policy changes, have so changed the forest management environment as to shift the overall thrust of one Model Forest's initiatives relative to its original basic goals, and this has prompted the industrial partners to greatly decrease their involvement in the Forest projects. In some provinces, newly-developed legislation and policies are so comprehensive and inflexible regarding forest practices as to impede the operational testing of forest management practices, e.g., modified harvesting systems in Ontario and British Columbia.

18. In your opinion, what should be the role of the Canadian Forest Service in a second-generation program for Model Forests? (18)

Conclusion

Note that these conclusions are based solely on the views expressed in the interviews with Model Forest participants and in the stakeholder consultations.

- Among the interviewees associated with Model Forests, it was virtually unanimous that there should be a second-generation program.
- There was generally great concern that if the Model Forest Program does not continue, much of its potential accomplishments will be lost.
- The second-generation Model Forest Program should focus less on research[30] and much more on applied work and technology transfer.
- CFS should not expand its role in a second generation (except at the Network level), but there was recognition that its continued involvement is important to maintain accountability and international credibility.
- The CFS should continue to provide core funding but other partners should be willing to put up more funds in recognition of the value they are getting from the Model Forests.
- Provinces should be important players in a second-generation program.

INTRODUCTION

To develop a response to this question, we examined a series of sub-questions:

- Should there be a second-generation Model Forest Program?
- What should a second-generation program focus on?
- What would be the CFS's role in such a program?
- Should other agencies (provincial governments, NGOs, etc.) have any specific role in a second-generation program?
- If starting over, what should be done differently?

30 We found that Model Forest stakeholders use the term 'research' to refer to a wider arrays of activities (covering social and economic issues as well as scientific questions) than is usually included in the conventional sense of scientific, laboratory-based research.

FINDINGS

- Among the interviewees associated with Model Forests, it was virtually unanimous that there should be a second-generation program. As already noted, those involved believe that the Model Forests are only now reaching the point where they can begin to generate the type of practical information that can be used to change forest management practices. Five years is simply not long enough to achieve the fundamental change that the Model Forest Program set out to make.

> **"I think the Model Forest Program needs one more 5-year stint before the fruits of its labours will become readily apparent. I also believe that during this period, Model Forest Programs/partners should determine how to make continuation of the program beyond the next five years self-sustaining. In our case, this will mean producing products and services that can be marketed to a wide array of interests. It does not seem too far away to suggest that this could/should happen over the next five years, but it will require another five years to enable it to happen."**
> *- Model Forest Stakeholder*

- There was generally great concern that if the Model Forest Program does not continue, much of its potential accomplishments will be lost. That is, many projects will not be completed within the present program time horizon, and the Model Forests need a renewal of the program to reach their full potential. However, there was also a minority view that the Program should only be renewed once for any given site. Those expressing this view were concerned about maintaining the concept of Model Forest funding as seed money.

- We found a real concern that non-renewal of the program would embarrass Canada internationally. As one respondent put it, "It would be a disastrous mistake to drop the Model Forest Program".

Second-Generation Focus

Our response for Question 4 provides the foundation for our view on the future focus of the Model Forest Program. We suggested a six-step sequence through which Model Forests could be expected to proceed:

1) Formally establish a multi-stakeholder process (the Model Forest management partnership).

2) Improve existing database (information collection, including research).

3) Develop an integrated resource management planning process to accommodate multiple interests, and to evaluate trade-offs.[31]

4) Make decisions based on trade-off analysis, and transfer the decision to the appropriate management agencies

31 As noted previously, it is uncertain at this time whether a Model Forest will ever have the responsibility/authority to develop the IRM plan per se, but it should at least develop the IRM planning process to accommodate multiple interests and evaluate trade-offs. The same argument applies to the next step. The Model Forest should make decisions based on trade-off analysis, and transfer the decision to appropriate management agencies (technology transfer).

5) Monitor the process.

6) Communication.

We noted that the current Model Forest Program has made substantial progress on steps 1 and 2 and modest progress on step 3, and is just beginning to reach the stage of development to tackle step 4. Step 5 really follows from step 4. Step 6 has received some attention during the first generation.

The focus for the second generation thus becomes obvious. Continue with step 2 as required, but intensify the focus on steps 3 and 4. Steps 5 and 6 should receive increased emphasis as the working results become available from step 4.

> **"An improvement I would suggest for a second generation Model Forest would be to put higher priority on actually performing on-the-ground forest improvement work (i.e., rather than just preaching, do some real forestry improvement work). I believe this would promote a great deal more credibility for the Model Forest Program, and of course the forest would benefit as well."**
> *– Model Forest Stakeholder*

This view is supported by the interview findings. In general, we found a strong theme running through the stakeholder's comments: the second-generation Model Forest Program should focus less on research and much more on applied work and technology transfer. Over the first generation, the Model Forests have filled a lot of knowledge gaps and are now in a much better position to look at ways to manage forests for multiple values, and to transfer that information to others outside the Model Forests. Still, a shift from research to technology transfer could represent a fundamental change. Most Model Forest participants tended to be focused on making their own Model Forest work. Most had not considered the concept of transfer to other areas or regions outside the Model Forest a priority yet, aside from those familiar with the International Program.

> **"I would like to see the continuation of the Model Forest Program wherein each Model Forest must re-submit a proposal that states how it will achieve IRM and sustainability with timetables, the whole bit."**
> *– Model Forest Stakeholder*

The interviewees also offered a variety of additional specific comments regarding the focus of the second generation. Among the items suggested are:

- A stronger outreach effort by the Model Forests, possibly involving distance education concepts and tools, and a more aggressive communications program aimed beyond the Model Forest Network.

- A stronger industrial buy-in involving a greater commitment from industrial partners to support the Model Forest and to implement the new forest management information and tools being generated across their management units. This could include more demonstration areas showing how sustainable practices are used in Canadian forestry.

- Stronger links with local economic development offices to build more on the economic aspects of sustainable development.

- Seek the opportunity for some Model Forests to actually manage all or part of their land base. One possibility would be to officially transfer to the Model Forest Board the responsibility for forest management on all or part of the land base included in the Model Forest. This would provide a virtual testing ground for the concepts, knowledge and technology developed through the first generation of the Model Forest Program.

- Some Model Forests need to find ways to bring the broader partnership into more active participation, particularly in the decision-making function. This view seems to arise from situations where there is a large nominal partnership but real decision-making has been concentrated in the hands of only a few of the partners.

The CFS Role

It is important to put the views offered on the CFS role in the second generation in context. Most of the people interviewed were private sector individuals who in some cases represent an organization that is a partner and/or stakeholder in a Model Forest.

- There was a widely held view that the current arrangement for CFS involvement with the individual Model Forests has worked very well, and should be continued in a second-generation program, although improvements at the Network level were needed. People appreciated and respected the essentially hand-off approach that allowed each Model Forest to set it own goals, objectives and priorities. There was, however, some support for an expanded CFS role in facilitation and information exchange to help minimize duplication and exchange ideas.

- We also found a general recognition of the need for a well focused national communications program including an outreach component aimed at public awareness, other resource managers, and also national networking. Carrying out these functions is seen as part of the CFS role.[32]

- Other possible roles for the CFS, for which we could find little support among Model Forest participants, included enforcing more uniformity in reporting to CFS and allowing the CFS to a voting Board Member. These ideas were very much a minority view.

- Although most people feel the CFS should not expand its role in a second generation (except at the Network level), there was recognition that its continued involvement is important to maintain accountability and international credibility.

- A funding mechanism that allows for uneven flow of funds to the Model Forests from year to year over the program and allows for carry forward to the next fiscal year should be introduced.

- The CFS should continue to provide core funding but other partners should be willing to put up more funds in recognition of the value they are getting from the Model Forests. It was even suggested that the CFS, the provinces and companies should jointly provide the core funding for the Model Forest (one third each).

- The Model Forest Secretariat should play a greater role in linking the Model Forests with the CFS Research Networks now being formed.

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32 However, we note that national communications programs are very expensive and it is difficult to evaluate their effectiveness. Thus, the need for a national communication program must be viewed in the context of the Model Forest Program which is small in national terms.

The Role of Other Agencies

- We found a strongly held view that the Provinces should be important players in a second-generation program. Generally, this view can be traced to the recognition that the Provinces have the legal responsibility for public forest lands and forest policy. The type of involvement contemplated covered a wide range of possibilities including full partnership and Board representation, committee membership, project work, and greater in-kind and/or financial support. Of course some of this already occurs in some Model Forests. At the same time, some people expressed a concern that greater provincial involvement may come with strings attached. In other words, they did not want to give up the high degree of operating autonomy the Model Forests have enjoyed up to now; this is seen as essential to maintaining their credibility as independent organizations fostering sustainable forest management.

  Moreover, in our view, the CFS must guard against the possibility that the Model Forests may be perceived as instruments of the provincial government and/or the forest industry if either of these organizations assumes a dominant role in funding or management. The current credibility of the Model Forest Program is due largely to the fact that the program is not dominated by any of the traditional heavyweights in the forestry sector. Even so, there is a perception in some Model Forests - Foothills, Abitibi, Fundy and Manitoba - that the industrial partner really controls the program.

- Participants in the Model Forests also felt that other federal agencies could and should participate more fully in a second-generation program. Suggestions included Heritage Canada, Tourism, Environment Canada, and Fisheries and Oceans. We note that from a Program perspective all of these agencies already participate, but not in every Model Forest. The real issue is whether there may be opportunities for greater participation in specific model forests to deal with important local sustainable development issues.

What Should be Done Differently?

A variety of ideas were suggested during the interviews:

- Given the experience of the first-generation program, more planning should be done before making spending decisions to achieve a sharper focus for Model Forest activities before committing Model Forest resources.

- Stronger links should be developed with the United States Forest Service and perhaps the American forestry community generally to take advantage of their rich array of research results and watershed management information. This was seen as a potentially rich source of technology transfer not tapped as well as it could have been during the first-generation program. However, the site specific characteristics of the Model Forests were also cited as a strong reason for needing research carried out locally to be sure that the results will fit the circumstances.

- As a general statement, greater provincial involvement will be necessary for the Model Forest Program to achieve maximum impact. However, the Program may have to be more flexible in the future to allow individual Model Forests to adapt to the many different and dynamic provincial policy environments that characterize Canadian forestry. In fact, some interviewees argued that in the two provinces which have undergone such substantial change in forest legislation and policy (Ontario and British Columbia), the establishment of Model Forests on public industrial forest land may lead to very little additional progress, and indeed may create friction between the various partners who are responsible for implementation of new policies and practices. In such situations, a Model Forest may accomplish more if it were located on non-industrial forest land, closer to major population centres.[33] This would help improve public understanding of the principles and practices of sustainable forest management.

- The Model Forests may even find they are competing for people and resources in provinces where other partnership organizations are emerging. For example, in Ontario, the use of community forests, private stewardship councils and forest management boards is expanding and these organizations are built on partnership arrangements that will draw on the same people and organizations now engaged by the Model Forest Program.

Stakeholder Consultation

As part of the Stakeholder Consultation, we also sought input on possible roles for the Canadian Forest Service in a second-generation of the Model Forest Program. The findings are summarized in Table 10. There was *agreement* that the Model Forest Secretariat should be maintained (about 25% answered, Don't Know). There was *strong agreement* that financial support to the Model Forest Network should be maintained. There was also on average, *agreement* that the CFS should increase its financial support to the Model Forest Program. Similarly, there was general *agreement* that the CFS should play an expanded role in the planning, implementation and management of the program. This corresponded with the *disagreement* that the CFS should reduce its financial support and allow the partners to assume more of the financial responsibilities for the Model Forests. General *agreement* was expressed in response to the statement: *The role of the CFS should remain the same in any second-generation agreement as it is in the current agreement*.

33 This is the situation in the EOMF where much of the land is held as small, privately-owned holdings rather than leased or owned by large forest products companies.

Table 10
Stakeholder Consultation on Second Generation Model Forest Program

9. The following statements describe possible roles for the Canadian Forest Service (CFS) in a second-generation Model Forest Program. Do you agree or disagree? 1 = Strongly Disagree 5 = Strongly Agree	Average Response
The CFS should play an expanded role in the planning, implementation and management of the program.	3.3
The CFS should increase its financial support to the Model Forest Program.	3.5
The CFS should reduce its financial support and allow the partners to assume more of the financial responsibilities for the Model Forests.	2.3
The CFS should maintain the Model Forest Secretariat.	3.9
The CFS should maintain its financial support of the Model Forest Network.	4.2
The role of the CFS should remain the same in any second-generation agreement as it is in the current agreement.	3.5

Note: See the Appendix for a discussion of the interpretation of the stakeholder consultation results and for the distribution of the responses across the response categories.

5.0 LOOKING TO THE FUTURE – RECOMMENDATIONS

INTRODUCTION

Although benefits of the Model Forest Program vary considerably between Model Forest sites, one common benefit was improvement of the communication between stakeholders where traditionally the communication was either non-existent or adversarial in nature (Step 1 in the management process was defined earlier in Figure 1 and Figure 2). While establishment of such communication was seldom an explicit objective in the Model Forest proposals, effective communication among stakeholders is an obvious prerequisite for design and implementation of sustainable forest management strategies which address multiple forest values.

> **"The flexibility of the Model Forest Program and its ability to bring new ideas to the table through its partnering role was the key. The Model Forest Program was a risk that paid off."**
>
> *- Model Forest Stakeholder*

The very modest accomplishments relating to trade-off analysis, decision-making, management plan development, and implementation we observed is partially owing to the amount of time and energy taken to establish this communication among stakeholders (the partnerships), and the progress made in this regard should not be undervalued. Nevertheless, the main objective of the Model Forest Program is to make real advances in sustainable forest management. Real advances will only occur if this improved communication is used to effect change in real forest management decision-making and on-the-ground implementation in a manner consistent with the principles and objectives of sustainable forestry. With this main objective in mind, we offer the following recommendations. In devising these recommendations, we were guided by the principle that in their future activities, the Model Forests should be able to demonstrate results of value, in other words, results that forest managers would be willing to pay for.

RECOMMENDATIONS

These recommendations were developed by the Committee with help from the consulting team.

1. **We recommend that a Model Forest Program be extended for an additional five year period.**

Some of the suggested terms and conditions for the extension of the program are contained in the subsequent recommendations and are meant to ensure that by the end of the second phase of the program, the goal of implementation of sustainable forestry principles on the ground are met.

2. **We recommend that as part of the next Model Forest Program all proponent sites be required to prepare a detailed proposal of how they will capitalize on their achievements to date and effect changes in (including measurable goals and objectives) forest management decision-making and implementation.**

To promote this movement from words to action, we offer the following views on the future of the Model Forest Program:

- The ten Model Forests have provided a rich variety of approaches to the task of changing the emphasis in Canadian forestry from sustained timber yield to sustainable forest management. Even at this early stage in the program, the

Model Forests have made substantial progress on new partnership and decision-making processes, information and data bases on ecosystem and socio-economic values, and integrated resource management planning that is both impressive and unique. All of these developments strongly support the central goal of shifting the emphasis of Canadian forestry towards sustainable forest management. Transferring the Model Forest concept to other areas is an important next step in spreading the philosophy and practice of sustainable forestry.

- The major goal of a second-generation program should be to use the five year period to demonstrate new knowledge, practices and technology in an operational setting. That is, the Model Forests should seek to foster more behavioural change in organizations responsible for implementing forest management. In the terms of Figure 2, we are suggesting that the Model Forests should be focusing their activities on the Analysis of Alternatives, Decision-making and Implementation stages of the forest management process. (We are assuming that the second generation program will be for five years for the rest of this discussion.)

- For the second generation, we believe there needs to be a reaffirmation of the partners' commitment to their Model Forest. This should be contained in a new proposal defining the partners' role(s) and the deliverables for the second five years. This proposal, if accepted, would form the basis for a new contribution agreement between the CFS and a Model Forest. A selection process similar to what was used during the first generation could be used. We do not have strong views on the number of Model Forests that should be included in the second generation, although we believe all ten should have the opportunity to apply. Some interviewees suggested that the Program may want to consider being more selective in funding (e.g. support only the more successful model forests). However, all ten Model Forests are very different and there is great learning value in the diversity of approaches and experience. Further, it is important to maintain the geographical distribution of the program to facilitate the adoption of the Model Forest approach at a regional level.

The following recommendations include some of the criteria for the renewal of contribution agreements with the existing Model Forests:

3. **We recommend each Model Forest review its partnership to ensure that the views of all interested stakeholders in their area, including Aboriginal people, are adequately represented in the submission for inclusion of the site in the second phase of the Model Forest program.**

The Model Forest must provide evidence that all stakeholders are represented and committed.

4. **We recommend each Model Forest demonstrate consensus among its current partners on the goals and objectives of the proposed activities of the second phase of the program.**

The goals should be relevant to the implementation of sustainable forestry activities on the ground.

One way of demonstrating consensus would be agreement on the cash and in-kind contributions that each partner will bring to the table towards a process aimed at achieving the stated goals.

5. **We recommend each Model Forest have as a clear goal the design, development and implementation of a plan that addresses sustainable development in forestry on the ground through a range of resource values appropriate to that area.**

   The Model Forest must provide evidence that the plan will lead to changes in how the forest land base will be managed. The new management plan must have the support and commitment of the partners. It should also contain measurable goals and objectives for evaluation.

6. **We recommend each Model Forest show where management control for the land base resides among the partners and how those with management authority will act to implement the devised strategy.**

   This may require a statement of how land owners will incorporate the Model Forest strategy into their current management procedures.

7. **We recommend each Model Forest present a plan which includes clear targets and actions, performance measures, accountability mechanisms, partners' financial contributions and other funding sources available for the second phase of the program.**

   While CFS should continue as a funding partner, the Model Forests should plan for self-sufficiency. CFS funds should be available so as not to limit the scope of activities in the next phase of the program. The proposal for the second phase of the program should contain a plan for long-term funding including non-CFS funds.

   Communication and Technology Transfer are important functions especially during the second generation where outreach to people and agencies outside the Model Forests will be important. This may warrant targeting a portion of the Model Forest Program funds to these activities specifically.

Selecting a course of management action to be implemented on the ground will be one of the most difficult steps in the management process, but it will also be the ultimate test of progress. Without specific inclusion of the above items in the Model Forest proposals, the risk is high that the next Model Forest Program will fail to move from theory to practice and thus contribute little to achieving the goal of making real changes in the forest management as practiced in Canada.

Finally, we note the following additional recommendations concerning the roles of the Model Forest Network, the CFS and the Model Forests themselves in a second-generation program.

Model Forest Network

8. **We recommend that in phase two of the Model Forest Program, consideration be given to expanding the Model Forest concept in other areas.**

   In effect, the Model Forests could begin to act as an institutionalized agency promoting the partnership approach to sustainable forest management.

9. **We recommend steps be initiated to improve networking among all Model Forest staff and partners and between all Model Forest sites.**

   Options must be found to make available to all partners at all sites, hard information on progress within the network. We also found room for improvement in vertical communications at most of the Model Forest sites.

10. **We recommend that one Model Forest Network meeting per year should be totally dedicated to reporting on accomplishments[34] over the previous year and outlining plans for the next year.**

    At this meeting exclusively devoted to the reporting task, each Model Forest will make a presentation to its peers of the Canadian Network showing how its accomplishments contribute to achieving its own objectives and those of the Model Forest Program. This reporting system should provide the basis for improved accountability by the Model Forests among themselves as peers, to the CFS as the funding agency, and to the Canadian public more generally.

11. **We recommend that the Model Forest Network design and adopt a set of guidelines for recording non-CFS resources used by the Model Forests.**

    These guidelines would help to eliminate the current confusion surrounding the level of cash and in-kind resources the Model Forests have been successful in attracting. They may also be helpful in bringing greater clarity to the Model Forests' financial situation in relation to the self-sufficiency objective previously addressed.

12. **We recommend that an accessible e-mail users group be set up to facilitate communication at all levels within the Model Forest Network and with others who have an interest in sustainable forest management.**

    Implementing this recommendation would normally be a function of the Model Forest Secretariat. However, it may be a task that the Model Forest Network should take on, making use of the computer expertise currently available in several of the Model Forests.

The CFS

13. **We recommend that CFS take on a greater liaison and coordinating role within the network.**

    This task will take on increasing importance as the Model Forests begin to produce results that would be the subject of a technology transfer process. Thus, it will be something to plan for during the second-generation program.

    A more proactive approach to managing the interface between the research laboratories and the Model Forests is required.

    A clarification of the roles and responsibilities of the regional coordinators and the Model Forest Secretariat is required.

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34 By this we mean outputs, deliverables and impacts produced by projects and activities funded to promote the shift from sustained yield to sustainable forest management.

14. **We recommend that CFS should state what its expectations are for international involvement by the Canadian Model Forest Program.**

    This would include the time and other resources involved, and who is responsible for covering the cost of these requirements.

15. **We recommend that in any second-generation program, links to connect CFS programs be built in from the beginning.**

    We found weak links between the Model Forest Program and the CFS research programs. The CFS must demonstrate a proactive approach to ensure that maximization of opportunities for linkage are presented both with its research programs and other relevant programs. The onus should be on the CFS headquarters to make this work.

The Model Forests

16. **We recommend that there be a rigourous, open and fully accountable process for soliciting and reviewing proposals, allocating funds and evaluating progress at each Model Forest.**

    Although we found evidence that improvements have been made, reviewing and strengthening this process should be an objective for Model Forests in the second phase of the program.

In assessing criteria for the renewal of Model Forests, the evaluation team is aware that factors other than the internal successes and failures of the program will be considered by Natural Resources Canada. The Department might for instance include such factors as:

- The role of the Model Forests in promoting Canada's interests in international trade, and the development of a global forest convention;
- The role of Model Forests in promoting the practice of sustainable development in Canada;
- The role of Model Forests in influencing provincial policy in Canada;
- Possible future scenarios for a federal presence in forestry; and,
- An evaluation of the original Model Forest objectives for their current validity, and the aspect of "unfinished business" in the Model Forests as they now stand, with an assessment of the need to complete the work already started to obtain maximum benefit from it.

The Terms of Reference of this evaluation required us to concentrate on this last aspect, and our recommendations find their inspiration mainly from a view of the program as seen by its stakeholders and peers, rather than a comprehensive review of all external factors, events and influences.

APPENDIX

Model Forest Program
Stakeholder Consultation Results

Interpretation of the Stakeholder Consultation Results

This appendix contains a summary of the results of the stakeholder consultation. The following tables give the frequency distribution of the responses (i.e. counts), and also indicate the Mode (most frequently chosen response) and the Average Response.

In responding, the stakeholders were asked to agree or disagree with statements about the Model Forest Program or the activities of their Model Forest. For each question, the response scale runs from 1 to 5. Choosing 1 indicates strong disagreement with the statement; choosing 5 means the respondent strongly agrees with the statement. Don't Know (8) and Not Applicable (9) are also possible choices.

We use Average Response values to summarize the results for those people choosing a response in the 1 to 5 range. The average values reported are the simple average of the average responses to a question by each Model Forest. In other words, for each question the average response rate for a question was calculated for each Model Forest. The average of these response rates was calculated by summing them and dividing by ten. This approach was used to treat each Model Forest equally in the overall response.

A set of responses uniformly distributed about the mid-point value (3) will yield an average response of 3. The average response will exceed 3 as the distribution of responses skews towards strong agreement. (Respondents chose 4 or 5.) To get an average response rate of 4 or more requires that approximately 70% of the respondents must have chosen 4 or 5. A similar skewness towards the disagreement end of the scale is required to get average scores in the 2.0 or less range.

For ease of interpretation of the consultation questions, we have used the following terms in the main text:

Average Response

4.0 or more	Strong agreement
3.5 to 3.9	Agreement
3.0 to 3.4	Weak agreement
2.5 to 2.9	Weak disagreement
2.0 to 2.4	Disagreement
1.9 or less	Strong disagreement

1. **The overall objective of the Model Forest Program is to shift forestry practices from sustained timber yield to sustainable development (sustainable forestry). Based on your participation in the Model Forest activities, how successful do you think your Model Forest has been at promoting and/or conducting the following activities to achieve the overall objective:**

Producing resource inventory/data.

Code	Ranking	Count	Percent		
1	Not Successful	9	2.0%		
2	2	37	8.2%		Average Response
3	3	76	16.9%		3.7
4	4	206	45.7%	-Mode	
5	Very Successful	64	14.2%		
8	Don't know	55	12.2%		
9	N/A	4	0.9%		

Using information systems (GIS, decision support systems).

Code	Ranking	Count	Percent		
1	Not Successful	5	1.1%		
2	2	24	5.3%		Average Response
3	3	69	15.2%		4.0
4	4	173	38.1%	-Mode	
5	Very Successful	119	26.2%		
8	Don know	59	13.0%		
9	N/A	5	1.1%		

Applying integrated resource management.

Code	Ranking	Count	Percent		
1	Not Successful	21	4.6%		
2	2	50	11.1%		Average Response
3	3	70	15.5%		3.5
4	4	176	38.9%	-Mode	
5	Very Successful	63	13.9%		
8	Don't know	56	12.4%		
9	N/A	16	3.5%		

Doing intensive silviculture.

Code	Ranking	Count	Percent		
1	Not Successful	30	6.7%		
2	2	54	12.0%		Average Response
3	3	79	17.5%		3.1
4	4	105	23.3%	-Mode	
5	Very Successful	36	8.0%		
8	Don't know	90	20.0%		
9	N/A	57	12.6%		

Applying improved harvesting operations.

Code	Ranking	Count	Percent		
1	Not Successful	32	7.1%		
2	2	43	9.5%		Average Response
3	3	88	19.4%		3.3
4	4	128	28.3%	-Mode	
5	Very Successful	44	9.7%		
8	Don't know	85	18.8%		
9	N/A	33	7.3%		

Applying forest protection/integrated pest management measures.

Code	Ranking	Count	Percent		
1	Not Successful	31	6.8%		
2	2	47	10.4%		Average Response
3	3	100	22.1%		3.0
4	4	82	18.1%		
5	Very Successful	20	4.4%		
8	Don't know	121	26.7%	-Mode	
9	N/A	52	11.5%		

Applying environmental protection measures.					
Code	Ranking	Count	Percent		
1	Not Successful	20	4.5%		
2	2	49	10.9%		Average Response
3	3	93	20.7%		3.3
4	4	126	28.1%	-Mode	
5	Very Successful	47	10.5%		
8	Don't know	75	16.7%		
9	N/A	39	8.7%		

Improved forest utilization.					
Code	Ranking	Count	Percent		
1	Not Successful	23	5.1%		
2	2	39	8.6%		Average Response
3	3	99	21.9%		3.4
4	4	111	24.5%	-Mode	
5	Very Successful	74	16.3%		
8	Don't know	70	15.5%		
9	N/A	37	8.2%		

Improved forest access.					
Code	Ranking	Count	Percent		
1	Not Successful	25	5.6%		Average Response
2	2	27	6.0%		3.3
3	3	102	22.7%	-Mode	
4	4	96	21.3%		
5	Very Successful	52	11.6%		
8	Don't know	75	16.7%		
9	N/A	73	16.2%		

Conducting research or having research conducted.					
Code	Ranking	Count	Percent		
1	Not Successful	8	1.8%		
2	2	12	2.6%		Average Response
3	3	52	11.4%		4.2
4	4	200	44.0%	-Mode	
5	Very Successful	164	36.0%		
8	Don't know	18	4.0%		
9	N/A	1	0.2%		

Demonstrating to others new approaches and results being achieved.					
Code	Ranking	Count	Percent		
1	Not Successful	15	3.3%		
2	2	37	8.2%		Average Response
3	3	83	18.3%		3.7
4	4	195	43.0%	-Mode	
5	Very Successful	99	21.8%		
8	Don't know	24	5.3%		
9	N/A	1	0.2%		

Sharing information with others in the Model Forest network.					
Code	Ranking	Count	Percent		
1	Not Successful	6	1.3%		
2	2	29	6.4%		Average Response
3	3	65	14.3%		3.9
4	4	143	31.4%	-Mode	
5	Very Successful	110	24.2%		
8	Don't know	99	21.8%		
9	N/A	3	0.7%		

Establishing a good working partnership to operate your Model Forest.					
Code	Ranking	Count	Percent		
1	Not Successful	16	3.5%		
2	2	30	6.6%		Average Response
3	3	46	10.1%		4.0
4	4	186	40.7%	-Mode	
5	Very Successful	157	34.4%		
8	Don't know	21	4.6%		
9	N/A	1	0.2%		

Creating a partnership with an appropriate mix of partners.					
Code	Ranking	Count	Percent		
1	Not Successful	12	2.6%		
2	2	31	6.8%		Average Response
3	3	52	11.4%		4.0
4	4	169	37.0%		
5	Very Successful	176	38.5%	-Mode	
8	Don't know	17	3.7%		
9	N/A	0	0.0%		

Educating the general public on sustainable development.					
Code	Ranking	Count	Percent		
1	Not Successful	30	6.6%		
2	2	78	17.2%		Average Response
3	3	112	24.7%		3.2
4	4	159	35.0%	-Mode	
5	Very Successful	49	10.8%		
8	Don't know	25	5.5%		
9	N/A	1	0.2%		

Educating the general public on the changes and activities taking place at your Model Forest.					
Code	Ranking	Count	Percent		
1	Not Successful	23	5.1%		
2	2	74	16.4%		Average Response
3	3	122	27.1%		3.3
4	4	162	36.0%	-Mode	
5	Very Successful	43	9.6%		
8	Don't know	26	5.8%		
9	N/A	0	0.0%		

Accelerating the implementation of sustainable development in the practice of forestry, in particular the concept of integrated resource management.					
Code	Ranking	Count	Percent		
1	Not Successful	25	5.6%		
2	2	60	13.5%		Average Response
3	3	106	23.8%		3.3
4	4	159	35.7%	-Mode	
5	Very Successful	45	10.1%		
8	Don't know	47	10.5%		
9	N/A	4	0.9%		

Applying new and innovative approaches in the management of forests.					
Code	Ranking	Count	Percent		
1	Not Successful	20	4.5%		
2	2	53	11.9%		Average Response
3	3	93	20.9%		3.5
4	4	165	37.1%	-Mode	
5	Very Successful	58	13.0%		
8	Don't know	43	9.7%		
9	N/A	13	2.9%		

Testing and demonstrating the best sustainable forestry practices using the most advanced technology and forest practices available.					
Code	Ranking	Count	Percent		
1	Not Successful	22	4.9%		
2	2	47	10.5%		Average Response
3	3	113	25.2%		3.3
4	4	148	33.0%	-Mode	
5	Very Successful	38	8.5%		
8	Don't know	63	14.1%		
9	N/A	17	3.8%		

Attaining the overall objective of shifting forestry practices from sustained timber yield to sustainable development.					
Code	Ranking	Count	Percent		
1	Not Successful	24	5.4%		
2	2	63	14.1%		Average Response
3	3	116	26.0%		3.3
4	4	136	30.4%	-Mode	
5	Very Successful	38	8.5%		
8	Don't know	61	13.6%		
9	N/A	9	2.0%		

2. Applying the concept of Sustainable Development to forest management may lead to conflicts from applying non-traditional management strategies. Do you agree or disagree with the following statements:

The Model Forest has increased my appreciation of the values other people assign to the forest.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	22	4.9%		
2	2	33	7.3%		Average Response
3	3	58	12.9%		4.0
4	4	168	37.3%	-Mode	
5	Strongly Agree	161	35.8%		
8	Don't know	4	0.9%		
9	N/A	4	0.9%		

The Model Forest has served as a good means of bringing together people with conflicting values.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	22	4.9%		
2	2	54	11.9%		Average Response
3	3	159	35.2%		4.1
4	4	187	41.4%	-Mode	
5	Strongly Agree	15	3.3%		
8	Don't know	1	0.2%		
9	N/A	1	0.2%		

The Model Forest has created good methods to resolve conflicts between people holding different forest values.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	24	5.4%		
2	2	51	11.4%		Average Response
3	3	124	27.7%		3.4
4	4	130	29.0%	-Mode	
5	Strongly Agree	69	15.4%		
8	Don't know	42	9.4%		
9	N/A	8	1.8%		

The Model Forest has been better at conflict resolution than other non-Model Forest areas that I know.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	22	4.9%		
2	2	30	6.6%		Average Response
3	3	72	15.9%		3.6
4	4	98	21.7%		
5	Strongly Agree	71	15.7%		
8	Don't know	146	32.3%	-Mode	
9	N/A	13	2.9%		

3. **Model Forests were expected to attract funding (cash and in-king) from their partners to add to the federal funding coming from the Model Forest Program. Do you agree or disagree with the following statements?**

This Model Forest has been successful in attracting funding from its partners.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	15	3.3%		
2	2	39	8.7%		Average Response
3	3	72	16.1%		3.6
4	4	152	33.9%	-Mode	
5	Strongly Agree	81	18.1%		
8	Don't know	85	19.0%		
9	N/A	4	0.9%		

Partners of this Model Forest could contribute more than they now do.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	8	1.8%		
2	2	64	14.1%		Average Response
3	3	82	18.1%		3.6
4	4	132	29.1%	-Mode	
5	Strongly Agree	58	12.8%		
8	Don't know	106	23.3%		
9	N/A	4	0.9%		

If Model Forest Program funding were cut by 50%, partners of this Model Forest would increase their contribution to replace the lost resources.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	95	20.9%		
2	2	121	26.7%		Average Response
3	3	60	13.2%		2.2
4	4	30	6.6%		
5	Strongly Agree	9	2.0%		
8	Don't know	135	29.7%	-Mode	
9	N/A	4	0.9%		

The Model Forest has been so successful that I am confident the Partners will increase their level of financial support in the future, even if Model Forest Program support remains at its current level.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	52	11.4%		
2	2	102	22.3%		Average Response
3	3	108	23.6%		2.6
4	4	62	13.6%		
5	Strongly Agree	11	2.4%		
8	Don't know	118	25.8%	-Mode	
9	N/A	4	0.9%		

4. The following statements describe various ways the Model Forests could contribute to the overall objective of moving from a sustained yield to a sustainable development strategy of forestry management. Please indicate the extent of your agreement or disagreement with the statements.

The Model Forest has demonstrated forest management involving a wide variety of stakeholder values.

Code	Ranking	Count	Percent		
1	Strongly Disagree	24	5.3%		
2	2	39	8.6%		Average Response
3	3	64	14.0%		3.7
4	4	191	41.9%	-Mode	
5	Strongly Agree	106	23.2%		
8	Don't know	23	5.0%		
9	N/A	9	2.0%		

The Model Forest has demonstrated forest management involving a wide mix of disciplines (e.g., foresters, biologists, ecologists, economists, sociologists, First Nation forest knowledge, etc.).

Code	Ranking	Count	Percent		
1	Strongly Disagree	22	4.9%		
2	2	32	7.2%		Average Response
3	3	40	8.9%		3.9
4	4	187	41.8%	-Mode	
5	Strongly Agree	142	31.8%		
8	Don't know	15	3.4%		
9	N/A	9	2.0%		

Compared with non-Model Forest areas, the latest in modern management techniques are being used in our Model Forest.

Code	Ranking	Count	Percent		
1	Strongly Disagree	21	4.7%		
2	2	46	10.2%		Average Response
3	3	88	19.5%		3.5
4	4	134	29.7%	-Mode	
5	Strongly Agree	55	12.2%		
8	Don't know	91	20.2%		
9	N/A	16	3.5%		

There have been links established between our Model Forst and various agencies that conduct specific forest research.

Code	Ranking	Count	Percent		
1	Strongly Disagree	3	0.7%		
2	2	6	1.3%		Average Response
3	3	38	8.4%		4.3
4	4	189	41.7%	-Mode	
5	Strongly Agree	173	38.2%		
8	Don't know	41	9.1%		
9	N/A	3	0.7%		

These links have ensured only the most relevant reserach is being conducted.

Code	Ranking	Count	Percent		
1	Strongly Disagree	14	3.1%		
2	2	48	10.8%		Average Response
3	3	111	24.9%		3.5
4	4	140	31.5%	-Mode	
5	Strongly Agree	52	11.7%		
8	Don't know	74	16.6%		
9	N/A	6	1.3%		

These links have ensured that top quality research projects are being completed.

Code	Ranking	Count	Percent		
1	Strongly Disagree	14	3.1%		
2	2	29	6.4%		Average Response
3	3	95	20.9%		3.7
4	4	166	36.5%	-Mode	
5	Strongly Agree	73	16.0%		
8	Don't know	74	16.3%		
9	N/A	4	0.9%		

I am confident that the research results will directly influence future forest management techiques.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	18	4.0%		
2	2	36	7.9%		Average Response
3	3	69	15.2%		3.8
4	4	169	37.3%	-Mode	
5	Strongly Agree	117	25.8%		
8	Don't know	0	0.0%		
9	N/A	2	0.4%		

Our Model Forest has successfully transferred new technology related to sustainable development to forest managers.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	27	6.0%		
2	2	47	10.4%		Average Response
3	3	103	22.8%		3.3
4	4	154	34.1%	-Mode	
5	Strongly Agree	41	9.1%		
8	Don't know	75	16.6%		
9	N/A	5	1.1%		

Our Model Forest is using landscape planning techniques as part of its overall forest management system.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	21	4.6%		
2	2	28	6.2%		Average Response
3	3	72	15.9%		3.6
4	4	129	28.4%	-Mode	
5	Strongly Agree	85	18.7%		
8	Don't know	100	22.0%		
9	N/A	19	4.2%		

Our Model Forest area has experienced greater economic development than it would have if the Model Forest had not been established.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	33	7.3%		
2	2	49	10.9%		Average Response
3	3	70	15.6%		3.4
4	4	103	22.9%		
5	Strongly Agree	62	13.8%		
8	Don't know	124	27.6%	-Mode	
9	N/A	8	1.8%		

Information about our Model Forest activities are being circulated widely.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	18	4.0%		
2	2	59	13.3%		Average Response
3	3	87	19.6%		3.6
4	4	160	36.0%	-Mode	
5	Strongly Agree	85	19.1%		
8	Don't know	33	7.4%		
9	N/A	3	0.7%		

5. Canada's competitiveness in traditional forest products (such as pulp and paper, and lumber) may have been affected as a result of the program. Do you agree or disagree with the following statements:

The Model Forest Program is contributing to lowering the costs of producing traditional forest products.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	59	13.1%		
2	2	82	18.3%		Average Response
3	3	76	16.9%		2.4
4	4	30	6.7%		
5	Strongly Agree	8	1.8%		
8	Don't know	178	39.6%	-Mode	
9	N/A	16	3.6%		

The Model Forest Program is resulting in higher costs of producing traditional forest products.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	43	9.6%		
2	2	57	12.7%		Average Response
3	3	104	23.2%		2.7
4	4	38	8.5%		
5	Strongly Agree	11	2.5%		
8	Don't know	180	40.1%	-Mode	
9	N/A	15	3.3%		

The Model Forest Program can be credited with assisting Canadian industry to maintain its international market share.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	21	4.7%		
2	2	29	6.5%		Average Response
3	3	83	18.5%		3.4
4	4	107	23.8%		
5	Strongly Agree	41	9.1%		
8	Don't know	154	34.3%	-Mode	
9	N/A	14	3.1%		

The Model Forest Program can be credited with assisting Canadian industry to gain access to new international markets.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	21	4.7%		
2	2	35	7.8%		Average Response
3	3	85	19.1%		3.3
4	4	80	17.9%		
5	Strongly Agree	40	9.0%		
8	Don't know	173	38.8%	-Mode	
9	N/A	12	2.7%		

I believe the Model Forests Program is demonstrating to the world community that Canada is committed to managing its forest resources in an environmentally sound manner for ther future benefit of all.					
Code	Ranking	Count	Percent		
1	Strongly Disagree	17	3.8%		
2	2	27	6.0%		Average Response
3	3	45	10.0%		4.0
4	4	171	38.0%	-Mode	
5	Strongly Agree	150	33.3%		
8	Don't know	39	8.7%		
9	N/A	1	0.2%		

6. We are interested in your view of some possible impacts of the Model Forest Program. Do you agree or disagree with the following:

The activities of our Model Forest have created more jobs than I expected.

Code	Ranking	Count	Percent		
1	Strongly Disagree	34	7.6%		
2	2	52	11.6%		Average Response
3	3	89	19.8%		3.2
4	4	99	22.0%		
5	Strongly Agree	43	9.6%		
8	Don't know	124	27.6%	-Mode	
9	N/A	9	2.0%		

The activities of our Model Forest has had a bigger effect on the way forest management is done on private woodlots than I expected.

Code	Ranking	Count	Percent		
1	Strongly Disagree	39	8.8%		
2	2	71	16.0%		Average Response
3	3	79	17.8%		2.7
4	4	58	13.0%		
5	Strongly Agree	23	5.2%		
8	Don't know	113	25.4%	-Mode	
9	N/A	62	13.9%		

The activities of our Model Forest have had a bigger effect on the management of Aboriginal forests than I expected.

Code	Ranking	Count	Percent		
1	Strongly Disagree	36	8.1%		
2	2	48	10.8%		Average Response
3	3	60	13.5%		2.6
4	4	59	13.2%		
5	Strongly Agree	19	4.3%		
8	Don't know	123	27.6%	-Mode	
9	N/A	101	22.6%		

Greater use of Aboriginal forest management approaches has been adopted by other forest management than I expected.

Code	Ranking	Count	Percent		
1	Strongly Disagree	44	9.9%		
2	2	55	12.3%		Average Response
3	3	50	11.2%		2.4
4	4	44	9.9%		
5	Strongly Agree	15	3.4%		
8	Don't know	143	32.1%	-Mode	
9	N/A	95	21.3%		

The non-Aboriginal Partners in our Model Forest now understand Aboriginal issues such as history, rights and culture.

Code	Ranking	Count	Percent		
1	Strongly Disagree	28	6.2%		
2	2	36	8.0%		Average Response
3	3	70	15.5%		2.9
4	4	98	21.7%	-Mode	
5	Strongly Agree	52	11.5%		
8	Don't know	95	21.0%		
9	N/A	73	16.2%		

The activities of our Model Forest has resulted in better use of available wood supplies than I expected.

Code	Ranking	Count	Percent		
1	Strongly Disagree	44	9.8%		
2	2	51	11.3%		Average Response
3	3	122	27.1%		2.9
4	4	64	14.2%		
5	Strongly Agree	18	4.0%		
8	Don't know	132	29.3%	-Mode	
9	N/A	20	4.4%		

7. Do you agree or disagree with the following statements about the management of the Canadian Model Forest Program? (The Program is managed by the Canadian Forest Service through the Model Forest Secretariat.)

The Model Forest Secretariat is helping to make things work smoothly at our Model Forest.				
Code	Ranking	Count	Percent	
1	Strongly Disagree	5	1.1%	
2	2	21	4.6%	Average Response
3	3	76	16.7%	3.6
4	4	84	18.5%	
5	Strongly Agree	46	10.1%	
8	Don't know	213	46.9%	-Mode
9	N/A	9	2.0%	

The Model Forest Secretariat is helping to make the Model Forest Network work effectively.				
Code	Ranking	Count	Percent	
1	Strongly Disagree	1	0.2%	
2	2	14	3.1%	Average Response
3	3	74	16.3%	3.7
4	4	104	23.0%	
5	Strongly Agree	45	9.9%	
8	Don't know	207	45.7%	-Mode
9	N/A	8	1.8%	

The Model Forest Secretariat is providing effective direction and leadership to the Model Forest Network.				
Code	Ranking	Count	Percent	
1	Strongly Disagree	2	0.4%	
2	2	20	4.4%	Average Response
3	3	91	20.1%	3.6
4	4	84	18.6%	
5	Strongly Agree	38	8.4%	
8	Don't know	208	46.0%	-Mode
9	N/A	9	2.0%	

The Canadian Forest Service is providing effective leadership to the Model Forest Program by being actively involved in the program.				
Code	Ranking	Count	Percent	
1	Strongly Disagree	11	2.4%	
2	2	22	4.9%	Average Response
3	3	74	16.4%	3.7
4	4	147	32.5%	-Mode
5	Strongly Agree	68	15.0%	
8	Don't know	124	27.4%	
9	N/A	6	1.3%	

The Canadian Forest Service is providing effective leadership to the Model Forest Program by helping to identify potential problem areas.				
Code	Ranking	Count	Percent	
1	Strongly Disagree	15	3.3%	
2	2	31	6.9%	Average Response
3	3	92	20.4%	3.5
4	4	112	24.8%	
5	Strongly Agree	43	9.5%	
8	Don't know	153	33.9%	-Mode
9	N/A	6	1.3%	

8. A possible result of the Model Forest Program is increased networking among all those interested in the sustainable management of Canadian forests. Do you agree or disagree with the following statements

The Model Forest Program has brought me into contact with many other people in my own local area who are also interested in the sustainable management of Canadian forests.

Code	Ranking	Count	Percent		
1	Strongly Disagree	22	4.8%		
2	2	30	6.6%		Average Response
3	3	49	10.8%		4.0
4	4	144	31.7%		
5	Strongly Agree	191	42.1%	-Mode	
8	Don't know	7	1.5%		
9	N/A	11	2.4%		

The Model Forest Program has brought me into contact with many other people in other parts of the province who are also interested in sustainable management of Canadian forests.

Code	Ranking	Count	Percent		
1	Strongly Disagree	38	8.4%		
2	2	58	12.8%		Average Response
3	3	76	16.7%		3.6
4	4	146	32.2%	-Mode	
5	Strongly Agree	113	24.9%		
8	Don't know	5	1.1%		
9	N/A	18	4.0%		

The Model Forest Program has brought me into contact with many other people in other provinces who are also interested in sustainable management to Canadian forests.

Code	Ranking	Count	Percent		
1	Strongly Disagree	85	18.8%		
2	2	86	19.1%		Average Response
3	3	76	16.9%		3.0
4	4	105	23.3%	-Mode	
5	Strongly Agree	65	14.4%		
8	Don't know	5	1.1%		
9	N/A	28	6.2%		

The Model Forest Program has brought me into contact with many other people in other countries who are also interested in sustainable management of forests.

Code	Ranking	Count	Percent		
1	Strongly Disagree	119	26.5%	-Mode	
2	2	78	17.4%		Average Response
3	3	67	14.9%		2.7
4	4	82	18.3%		
5	Strongly Agree	58	12.9%		
8	Don't know	6	1.3%		
9	N/A	39	8.7%		

The Model Forest has brought me into contact with many people interested in sustainable forest management than would have been the case without the Model Forest Program.

Code	Ranking	Count	Percent		
1	Strongly Disagree	35	7.7%		
2	2	36	8.0%		Average Response
3	3	47	10.4%		3.9
4	4	134	29.6%		
5	Strongly Agree	188	41.6%	-Mode	
8	Don't know	4	0.9%		
9	N/A	8	1.8%		

Our Model Forest has the broad mix of partners necessary to achieve the overall objective of shifting from sustainable timber yield to sustainable forestry management.

Code	Ranking	Count	Percent		
1	Strongly Disagree	11	2.4%		
2	2	29	6.4%		Average Response
3	3	60	13.3%		4.0
4	4	177	39.3%	-Mode	
5	Strongly Agree	153	34.0%		
8	Don't know	19	4.2%		
9	N/A	1	0.2%		

9. The following statements describe possible roles for the Canadian Forest Service (CFS) in a second-generation Model Forest Program. Do you agree or disagree?

The CFS should play an expanded role in the funding, implementation and management of the program.

Code	Ranking	Count	Percent		
1	Strongly Disagree	39	8.8%		
2	2	73	16.4%		Average Response
3	3	99	22.2%		3.3
4	4	100	22.5%	-Mode	
5	Strongly Agree	82	18.4%		
8	Don't know	48	10.8%		
9	N/A	4	0.9%		

The CFS should increase its financial support to the Model Forest Program.

Code	Ranking	Count	Percent		
1	Strongly Disagree	35	7.8%		
2	2	57	12.7%		Average Response
3	3	90	20.0%		3.5
4	4	108	24.1%		
5	Strongly Agree	114	25.4%	-Mode	
8	Don't know	41	9.1%		
9	N/A	4	0.9%		

The CFS should reduce its financial support and allow the partners to assume more of the financial responsibilities for the Model Forests.

Code	Ranking	Count	Percent		
1	Strongly Disagree	116	25.8%		
2	2	128	28.4%	-Mode	
3	3	86	19.1%		Average Response
4	4	42	9.3%		2.3
5	Strongly Agree	30	6.7%		
8	Don't know	41	9.1%		
9	N/A	6	1.3%		

The CFS should maintain the Model Forest Secretariat.

Code	Ranking	Count	Percent		
1	Strongly Disagree	10	2.2%		
2	2	17	3.8%		Average Response
3	3	81	18.1%		3.9
4	4	115	25.7%	-Mode	
5	Strongly Agree	108	24.1%		
8	Don't know	109	24.3%		
9	N/A	8	1.8%		

The CFS should maintain its financial support of the Model Forest Network.

Code	Ranking	Count	Percent		
1	Strongly Disagree	10	2.2%		
2	2	17	3.8%		Average Response
3	3	45	10.0%		4.2
4	4	142	31.6%		
5	Strongly Agree	188	41.9%	-Mode	
8	Don't know	43	9.6%		
9	N/A	4	0.9%		

The role of the CFS should remain the same in any second generation agreement as it is in the current agreement.

Code	Ranking	Count	Percent		
1	Strongly Disagree	25	5.6%		
2	2	54	12.1%		Average Response
3	3	98	21.9%		3.5
4	4	113	25.2%	-Mode	
5	Strongly Agree	86	19.2%		
8	Don't know	68	15.2%		
9	N/A	4	0.9%		

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We welcome inquiries.

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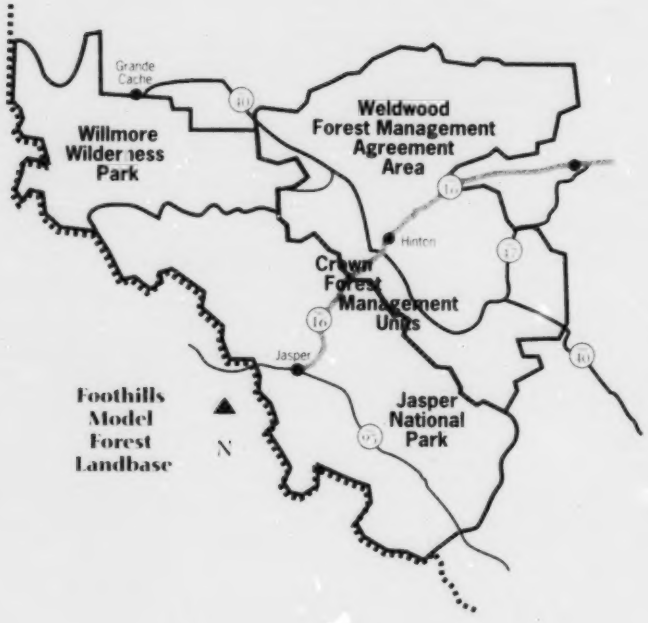

MODEL FOREST NETWORK
RESEAU DE FORÊTS MODÈLES

Canada has taken the lead in researching ways to sustain and enhance our forests. The government of Canada, through the Canadian Forest Service, initiated the Model Forest Network in 1992. It introduced this system of 11 Canadian and a number of international research sites "dedicated to building partnerships locally, nationally, and internationally to generate new ideas and on-the-ground tools for sustainable forest management." This process has brought together hundreds of partners including academia, industry, government, communities, aboriginal peoples, the public, and other stakeholders.

Alberta is represented in the Canadian Network by the Foothills Model Forest in Hinton. At 2.75 million hectares (27,500 square kilometres), the Foothills Model Forest is the largest model forest in the world. It includes Jasper National Park, Weldwood of Canada Limited's (Hinton Division) working forest management agreement area, Willmore Wilderness Park and other provincial crown lands.